As filed with the Securities and Exchange Commission on February 12, 2013 **Registration No. 333-_____**

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Heat Biologics, Inc.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

541700
(Primary Standard Industrial Classification Code Number)

26-2844103
(I.R.S. Employer Identification Number)

100 Europa Drive
Chapel Hill, North Carolina 27517
(919) 240-7133
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Jeffrey Wolf
Chief Executive Officer and Chairman of the Board of Directors
Heat Biologics, Inc.
100 Europa Drive
Chapel Hill, North Carolina 27517
(919) 240-7133
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
Hank Gracin, Esq.
Leslie Marlow, Esq.
Gracin & Marlow, LLP
The Chrysler Building
405 Lexington Avenue, 26th Floor
New York, New York 10174
(212) 907-6457

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☑

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If delivery of the prospectus is expected to be made pursuant to Rule 424, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☑
(Do not check if a smaller reporting company)			

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Amount to Be Registered	Proposed Maximum Offering Price Per Security (1)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee(2))
Common stock, par value $.0001 per share	3,450,000	$	$	$
Warrants (3)	172,500	$	$	$
Total	3,622,500		$	$

(1) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price, including the offering price of shares that the underwriters have the option to purchase to cover over-allotments, if any.

(2) Calculated under Section 6(b) of the Securities Act of 1933 as .00013640 of the aggregate offering price.

(3) We have agreed to issue warrants exercisable within four years after the effective date of this registration statement representing 5% of the shares issued in the offering (the "Underwriter Warrants") to [_____] for nominal consideration. Resales of the Underwriter Warrants on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, are registered hereby. Resales of shares of Common Stock issuable upon exercise of the Underwriter Warrants are also being similarly registered on a delayed or continuous basis hereby. See "Underwriting."

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the United States Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

THE INFORMATION CONTAINED IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS DECLARED EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED FEBRUARY ___, 2013

PRELIMINARY PROSPECTUS

HEAT BIOLOGICS, INC.

3,000,000

SHARES OF COMMON STOCK

This is our initial public offering. We are offering 3,000,000 shares of our Common Stock, $.0001 par value per share. We expect the public offering price to be between $___ and $___ per share.

Prior to this offering there has been no public market for our securities. We intend to list our Common Stock on The NASDAQ Capital Market ("NASDAQ") under the symbol "HEAX". The listing of our Common Stock on the NASDAQ is a condition to the offering.

The shares offered hereby are highly speculative and involve a high degree of risk and substantial dilution. An investment in these securities should be made only by investors who can afford a loss of their entire investment. **You should consider carefully the "Risk Factors" beginning on page 7 of this prospectus.**

Neither the Securities and Exchange Commission nor any state securities commission has approved these securities or determined that this prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

We are an "emerging growth company" within the meaning of the recently enacted Jumpstart Our Business Startups Act and will be subject to reduced public company reporting requirements.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to Issuer (before expenses)	$	$

(1) The amount does not include a non-accountable expense allowance in the amount of 1% of the offering proceeds or $___ exclusive of the over-allotments option. In addition, we have agreed to indemnify the underwriters against certain liabilities under the Securities Act of 1933, as amended. See "Underwriting" for a complete description of the foregoing and certain other arrangements between us and the underwriters.

It is expected that delivery of Common Stock against payment will be made on or about _____. We have granted the underwriters a 45–day option to purchase up to 450,000 additional shares solely to cover over-allotments, if any.

The date of this prospectus is _____, 2013

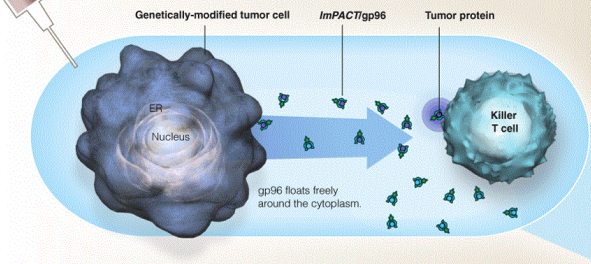
Aegis Capital Corp

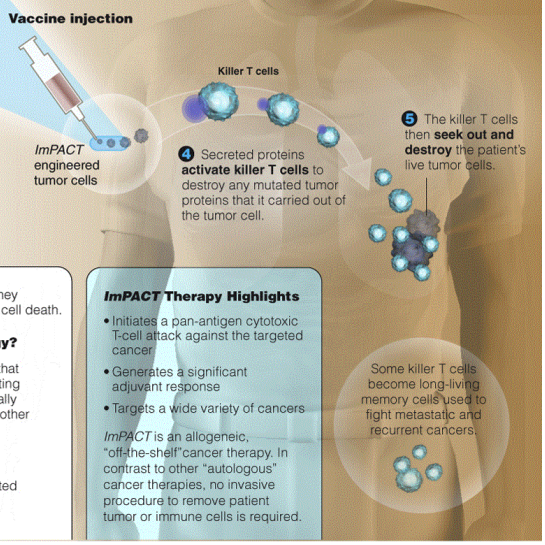
Heat Biologics *ImPACT* TECHNOLOGY

Heat Biologics' proprietary Immune Pan Antigen Cytotoxic Therapy *(ImPACT)* reprograms live "allogeneic" cancer cells to continually secrete their own antigens bound to a natural adjuvant called gp96 to generate a powerful and long-lasting immune response against a variety of tumors.

How *ImPACT* Technology Works

Live allogeneic tumor cells are genetically modified to continually "pump-out" their own cancer antigens bound to gp96, a natural adjuvant. These live *ImPACT* tumor cells are injected into the patient to stimulate a powerful immune response against the targeted cancer.





1. Heat Biologics creates **genetically modified tumor cell lines** that continually secrete their own mutated antigens bound to gp96.

2. The **immune system recognizes the mutated antigens** secreted by the injected tumor cells.

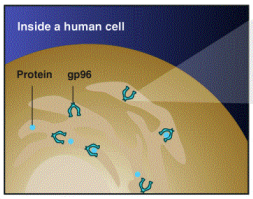
3. The gp96 acts as an adjuvant, **supercharging the patient's immune system** against the *ImPACT* secreted antigens.

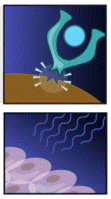
4. Secreted proteins **activate killer T cells** to destroy any mutated tumor proteins that it carried out of the tumor cell.

5. The killer T cells then **seek out and destroy** the patient's live tumor cells.

What is gp96?

gp96 is a "heat shock" protein resident in all human cells. It assists these cells in folding proteins they produce. gp96 is tethered to the cell and is normally only released during "necrosis", or unnatural cell death.





What is *ImPACT* Technology?

Heat Biologics severs the leash that binds gp96 to the cell, thus creating modified living cells that continually secrete gp96 bound to all of the other proteins produced by the cell.

These modified tumor cells are then mass-produced and irradiated to prevent them from replicating when injected into the patient.

ImPACT Therapy Highlights

- Initiates a pan-antigen cytotoxic T-cell attack against the targeted cancer
- Generates a significant adjuvant response
- Targets a wide variety of cancers

ImPACT is an allogeneic, "off-the-shelf" cancer therapy. In contrast to other "autologous" cancer therapies, no invasive procedure to remove patient tumor or immune cells is required.

Some killer T cells become long-living memory cells used to fight metastatic and recurrent cancers.

TABLE OF CONTENT

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of our Common Stock only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our Common Stock. Except where the context requires otherwise, in this prospectus the "Company," "Heat Biologics," "Heat," "we," "us" and "our" refer to Heat Biologics, Inc., a Delaware corporation formed in June 2008, and, where appropriate, its subsidiaries, Heat Biologics I, Inc., Heat Biologics III, Inc., Heat Biologics IV, Inc. and Heat Biologics GmbH. In June 2012, we divested our 92.5% interest in Heat Biologics II, Inc. The divestiture resulted in Heat Biologics II, Inc. being classified as discontinued operations in our consolidated financial statements for the years ended December 31, 2010 and 2011 and the nine months ended September 30, 2012 and 2011 reflect the operations of Heat Biologics II, Inc. as discontinued operations through June 25, 2012, the date of divestiture.

For investors outside the United States: Neither we nor any of the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of shares of Common Stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus or incorporated herein by reference. This summary is not complete and does not contain all of the information that you should consider before deciding to invest in our securities. We urge you to read this entire prospectus and the information incorporated by reference herein carefully, including the "Risk Factors" section. Except where the context requires otherwise, in this prospectus the "Company," "Heat Biologics," "Heat," "we," "us" and "our" refer to Heat Biologics, Inc., a Delaware corporation, and, where appropriate, its subsidiaries, Heat Biologics I, Inc. Heat Biologics III, Inc., Heat Biologics IV, Inc. and Heat Biologics GmbH.

Heat Biologics

Overview

We are a clinical-stage biopharmaceutical company engaged in the development of novel allogeneic, "off-the-shelf" cellular therapeutic vaccines to combat a wide range of cancers and infectious diseases. Our proprietary *ImPACT*™ Immune P an A ntigen C ytotoxic T herapy delivers live, genetically-modified, irradiated human cells which are reprogrammed to "pump out" a broad spectrum of cancer associated antigens together with a potent immune adjuvant called "gp96" to educate and activate a cancer patient's immune system to recognize and kill cancerous cells. The secreted antigen-adjuvant complex generate s potent anti-cancer immune responses in patients by mobilizing and activating cytotoxic "killer" T cells that target multiple cancer antigens, thus harnessing a patient's own immune system to fight cancer. In a phase I clinical trial in non-small cell lung cancer ("NSCLC") patients , our "off-the-shelf" therapeutic vaccine candidate HS-110 generated potent anti-cancer immune responses (including the mobilization and activation of killer T cells against multiple cancer antigens), was well tolerated and demonstrated preliminary indications of clinical efficacy.

Unlike autologous or personalized therapeutic vaccine approaches, our *ImPACT* therapeutic vaccine uses a common master cell line to mass-produce a single vaccine product applicable to all patients for each particular cancer type, thus providing a traditional biopharmaceutical approach to deliver pan-antigen immunotherapy with logistical, manufacturing and cost of goods benefits compared to autologous patient-specific approaches.

We are in the process of initiating a Phase II clinical trial in NSCLC patients with our therapeutic vaccine candidate HS-110, which is derived from a genetically-modified human lung cancer cell line. The results of our recently completed 18 patient Phase I clinical trial in lung cancer patients demonstrated that HS-110 was well tolerated with minimal to no indications of treatment-related toxicity and positive correlations between levels of observed immune responses and therapeutic efficacy. Specifically, the trial demonstrated a response rate of 73%[1] and a median survival of 16.5 months for immune responders, versus a median survival of 4.5 months for immune non-responders. The one-year overall survival rate of patients in our study was 44%, comparing quite favorably with the 5% rate for the historical control group. The historical median survival for our patient cohort is 4.5 months. One of our patients is surviving 29 months since starting our therapy and another patient is surviving after 47 months. These findings were consistent with multiple pre-clinical published studies on *ImPACT* therapy.

We have also developed *ImPACT* therapeutic vaccines for bladder cancer, breast cancer and ovarian cancer. We plan to initiate a Phase I clinical trial for bladder cancer in mid-2013 with HS-410, a genetically-modified bladder cancer cell line. To date, in excess of $13,000,000 of funding has been awarded to the primary inventor of the technology that we license by the National Institutes of Health (NIH) and through other research and clinical grants, which has been used to further develop the technology that we license.

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1 Responders are defined as those patients exhibiting a twofold or greater increase in their CD8 cells after 6 weeks of therapy.

The table below summarizes our current product candidates and their stages of development:

Product Candidate	Indication	Phase of Development	Upcoming Milestone(s)
HS-110	Non-Small Cell Lung Cancer (NSCLC)	Completed Phase I	2013 - Initiate Phase II – Q1, 2013
HS-410	Bladder Cancer Adjuvant	Completing cGMP Manufacturing	2013 - Initiate Phase I/II
HS-310	Ovarian Cancer	Initiating cGMP Manufacturing	2014 - Phase I/II trials
HS-510	Triple Negative Breast Cancer (TNBC)	Cell line development underway	2014 - Phase I/II trials
HS-HIV	HIV	Primate Studies Underway	Complete primate studies, Q2, 2013

The NIH is also currently fully funding the primary inventor's study of our HS-HIV product candidate in non-human primates with a therapeutic and prophylactic vaccine for the treatment and prevention of HIV utilizing our *ImPACT* approach.

***ImPACT* Therapy—Novel Pan-Antigen Immune Activation**

Our *ImPACT* therapy is a novel technology platform designed to educate and stimulate the immune system to combat specific disease targets, such as cancer cells.*ImPACT* utilizes live, human-derived, genetically-modified attenuated cells that generate an array of cellular antigens complexed to a secreted immunostimulatory protein called "gp96", a heat shock protein. The secreted antigen and adjuvant complex are designed to generate a potent immune response to cancer cells by mobilizing and activating a patient's own killer T-cells to recognize and attack a broad array of different tumor antigens with the goal of eliminating cancer cells. In contrast to other vaccine technologies that target only single cancer antigens, *ImPACT's* pan-antigen approach enables the patient to induce and maintain an immune response against a broad array of tumor-specific proteins, providing a much more robust immune response and limiting cancer cells' ability to evade the immune system. Clinical and pre-clinical results suggest that *ImPACT* generates potent anti-tumor immune responses capable of not only targeting and destroying tumors, but also maintaining cancer remission, even when re-challenged with new cancer cells. Our novel, off-the-shelf, live attenuated cell therapy can be used to not only combat a wide range of cancers, but also to treat various infectious diseases, such as hepatitis C, malaria and HIV. NIH-funded non-human primate studies of *ImPACT* for HIV are currently ongoing.

Investment Highlights

We believe that the following are key investment attributes of our company:

- Our *ImPACT* technology combines broad antigen targeting complexed with a potent immune adjuvant.*ImPACT* has already been shown to activate the immune system against a wide variety of antigens by eliciting a significant cytotoxic T-cell immune response as measured by extensive pre-clinical and clinical immunological testing. The activated immune response generated by our *ImPACT* Therapy may be useful in treating wide range of cancers and infectious diseases.
- We are entering a Phase II clinical trial to treat non-small cell lung cancer with our lead product, HS-110, based on encouraging safety and efficacy data generated in our Phase I trial. We expect to initiate Phase I/II clinical trials for bladder cancer with our second product candidate, HS-410, in mid 2013.
- The National Institutes of Health (NIH) and other organizations have supported our approach by providing significant funding to the primary inventor of the technology that we license for both the pre-clinical and our clinical studies.

- Our therapeutic vaccines are far easier and far less expensive to manufacture than autologous vaccines because our therapeutic vaccines do not require the harvesting of blood and/or cancer cells from each patient in order to manufacture a course of treatment. This is highly advantageous because it can bring the logistics, manufacturing, cost and distribution of our therapeutic vaccines within the purview of traditional biopharmaceutical product channels and dramatically expand our pool of corporate partners.

- Our technological approach does not rely on a predefined cancer antigen, but instead exploits the relationship between cytotoxic killer T-cells and cancer antigens native to each patient. As a result, our technology is antigen agnostic and can readily be adapted to incorporate new cancer types. Because of this, and the fact that our vaccine approach is allogeneic ("off-the-shelf"), we are able to rapidly develop new vaccines for different types of cancers and other diseases.
- Our business model continues to be capital efficient as we continue to leverage academic and institutional resources to develop new products but and to move these products into and through clinical trials.

Our Strategy

Our strategy is to utilize our novel *ImPACT* technology platform to produce a pipeline of novel immunotherapies for the treatment of various cancers and infectious diseases and rapidly and efficiently progress these products through clinical trials towards regulatory approval. Our near term strategy and upcoming milestones include the following:

- Initiate and complete Phase II clinical trials of our HS-110 drug against non-small cell lung cancer;
- Initiate and complete Phase I/II clinical trials of our HS-410 drug as an adjuvant against the recurrence of bladder cancer;
- Procure potential additional non-dilutive grants to fund development of *new ImPACT* indications;
- Corporate partner our programs with large pharmaceutical and biotech companies for the further development and commercialization of *ImPACT*-based drugs that will treat cancer and infectious disease indications; and
- Continue to expand our extensive patent portfolio.

Corporate Information

We were incorporated on June 10, 2008 under the laws of the State of Delaware under the name Heat Biologics, Inc. Our executive offices are located at 100 Europa Drive, Chapel Hill, North Carolina 27517 and our telephone number is (919) 240-7133. Our website address is www.heatbio.com. We use the name "Heat Biologics" and our logo as our trademark. References to Heat Biologics also include references to our subsidiaries Heat Biologics I, Inc. (of which we own a 92.5% interest), Heat Biologics III, Inc., Heat Biologics IV, Inc. and Heat Biologics GmbH unless otherwise indicated. In June 2012, we divested our 92.5% interest in Heat Biologics II, Inc., which resulted in Heat Biologics II, Inc. being classified as discontinued operations in our consolidated financial statements for the years ended December 31, 2011 and 2010 and for the nine months ended September 30, 2012 and 2011and reflect the operations of Heat Biologics II, Inc as discontinued operations through June 25, 2012, the date of divestiture. On May 30, 2012, we formed two wholly-owned subsidiaries, Heat Biologics III, Inc. and Heat Biologics IV, Inc. We assigned our proprietary rights related to the development and application of our *ImPACT* Therapy for the treatment of non-small lung cancer to Heat Biologics III, Inc. and our proprietary rights related to the development and application of our *ImPACT* Therapy to the treatment of bladder cancer to Heat Biologics IV, Inc.

The Offering

Shares offered by us(1)	3,000,000 (3,450,000 if the over-allotment option is exercised)
Common stock outstanding before the offering as of November 30, 2012(2)	4,221,448
Common stock to be outstanding after the offering(1)(2)	7,221,448
Common stock to be outstanding after the offering assuming the underwriters exercise in full their option to purchase an additional 450,000 shares (2)	7,671,448
Proposed NASDAQ symbol	We intend to apply for listing of our Common Stock on the Nasdaq Capital Market under the symbol "HEAX". The listing of our Common Stock on the NASDAQ is a condition to this offering.
Use of Proceeds	Assuming an initial offering price of $___ per share, which is the midpoint of the offering price range set forth on the cover page of this Prospectus, we estimate that the net proceeds to us from the sale of our Common Stock in this offering will be $___ (or $___ if the underwriter's exercise in full their option to purchase additional shares of Common Stock from us (after deducting estimated underwriting discounts and commissions and offering expenses). We intend to use the net proceeds from this offering to complete of our Phase II clinical trials for HS-110 against non-small lung cancer and the submission of related materials to the FDA; initiation and completion of Phase I clinical trials of HS-410 against bladder cancer; the development of our pipeline of preclinical programs; potential acquisitions of products and/or technology and working capital. See "Use of Proceeds."
Underwriter's warrant	In connection with this offering, we have also agreed to issue to the underwriters, for $100, a warrant to purchase up to 150,000 shares of our Common Stock, or 5% of the shares offered by this Prospectus (not including shares sold, if any, pursuant to the over-allotment option). If the underwriter exercises the warrant, each share of our Common Stock may be purchased for $___ per share (which is 125% of the price per share of our Common Stock offered by this prospectus).
Lock up Agreements	Our directors and officers will enter into customary "lock-up" agreements in favor of the underwriters pursuant to which such persons and entities will agree, for a period of 180 days from the closing date of this offering, that they will be subject to a lock-up agreement prohibiting any sales, transfers or hedging transactions of any of our securities owned by them without the underwriter's prior written consent.
Risk Factors	Investing in our common stock involves a high degree of risk. See "Risk Factors" on page 7 of this Prospectus.

(1) Does not include shares issuable upon exercise of the Underwriter's Warrants or shares contained in the over-allotment option.

(2) Does not include 1,978,036 shares of Common Stock to be issued upon automatic conversion of the preferred stock upon completion of this Offering, 122,262 shares of Common Stock to be issued upon exercise of outstanding warrants and their underlying securities, 8,333 shares of restricted stock for which restrictions have not yet lapsed, 1,414,564 shares of Common Stock issuable upon the exercise of options, and $147,817 of principal and accrued interest on convertible debt that is convertible into Common Stock based on the initial offering price.

Summary of Financial Data

The following information is qualified by reference to, and should be read in conjunction with, the consolidated financial statements and the notes thereto and "Management's Discussion and Analysis or Plan of Operation" contained elsewhere in this Prospectus. The Statement of Operations Data for the years ended December 31, 2011 and 2010 and the balance sheet data as of December 31, 2011 are derived from our consolidated financial statements, which have been audited and are included in this Prospectus. The unaudited consolidated Statements of Operations Data for the nine months ended September 30, 2012 and September 30, 2011 are derived from our unaudited financial statements included elsewhere in this Prospectus. Historical results are not necessarily indicative of future results.

Statement of Operations Data:

	For the Twelve Months Ended Ended December 31,		For the Nine Months September 30,	
	2011	2010	2012	2011
Revenues	$ 187,787	$ 375,692	$ 3,110	$ 187,787
Total Operating Expenses	2,222,587	959,280	1,605,035	1,646,255
Loss from Operations Before Non- Operating Expenses	(2,034,800)	(583,588)	(1,601,925)	(1,458,468)
Non Operating Expenses	64,182	42,274	76,595	69,304
Loss from Discontinued Operations	(14,160)	(95,982)	(18,379)	(14,160)
Net loss	(2,113,142)	(721,844)	(1,696,899)	(1,541,932)
Loss per share - basic and diluted	$ (0.50)	$ (0.17)	$ (0.40)	$ (0.37)

Balance Sheet Data:

	As of September 30, 2012	
	Actual	Pro Forma As Adjusted
Cash and Cash Equivalents	$ 131,324	$
Total Current Assets	196,766	
Total Assets	273,680	
Total Current Liabilities	538,989	
Long Term Liabilities	602,074	
Total Stockholders' (Deficit) Equity	$ (867,383)	$

	As of December 31, 2011	
	Actual	Pro Forma As Adjusted
Cash and Cash Equivalents	$ 98,646	$
Total Current Assets	104,239	
Total Assets	182,067	
Total Current Liabilities	446,735	
Long Term Liabilities	69,430	
Total Stockholders' (Deficit) Equity	$ (334,098)	$

The table above sets forth selected balance sheet data as of September 30, 2012 unaudited and as of December 31, 2011 on:

- an actual basis;
- on a pro forma as adjusted basis to reflect the receipt of the net proceeds of $ from the sale of 3,000,000 shares of Common Stock in this Offering at an assumed initial public offering price of $ per share, the midpoint of the range on the front cover of this prospectus, after deducting the estimated underwriting discounts and commissions, the underwriter's accountable expense allowance and estimated offering expenses payable by us. You should read the selected balance sheet data together with our consolidated financial statements and the related notes appearing elsewhere in this prospectus, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other financial information included in this prospectus.

RISK FACTORS

Investors should carefully consider the risks described below before deciding whether to invest in our securities. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected. In such case, the trading price of our Common Stock could decline and you could lose all or part of your investment. Our actual results could differ materially from those anticipated in the forward-looking statements made throughout this prospectus as a result of different factors, including the risks we face described below.

Risks Relating to our Company

We have had limited operations to date.

We are a start-up entity and have had limited operations to date. As a start-up entity, we are subject to many of the risks common to such enterprises, including our ability to implement our business plan, market acceptance of our proposed business and products, under-capitalization, cash shortages, limitations with respect to personnel, financing and other resources, competition from better funded and experienced companies, and uncertainty of our ability to generate revenues. There is no assurance that our activities will be successful or will result in any revenues or profit, and the likelihood of our success must be considered in light of the stage of our development. Even if we generate revenue, there can be no assurance that we will be profitable. In addition, no assurance can be given that we will be able to consummate our business strategy and plans, as described herein, or that financial, technological, market, or other limitations may force us to modify, alter, significantly delay, or significantly impede the implementation of such plans. We have insufficient results for investors to use to identify historical trends or even to make quarter to quarter comparisons of our operating results. You should consider our prospects in light of the risk, expenses and difficulties we will encounter as an early stage company. Our revenue and income potential is unproven and our business model is continually evolving. We are subject to the risks inherent to the operation of a new business enterprise, and cannot assure you that we will be able to successfully address these risks.

We have a limited operating history upon which to evaluate our ability to commercialize our products

We are a development-stage company and our success is dependent upon our ability to commercialize our products and we have not demonstrated an ability to perform the functions necessary for the successful commercialization of any product candidates. The successful commercialization of any product candidates will require us to perform a variety of functions, including:

- continuing to undertake pre-clinical development and clinical trials;
- participating in regulatory approval processes;
- formulating and manufacturing products; and
- conducting sales and marketing activities.

Our operations have been limited to organizing and staffing the Company, acquiring, developing and securing our proprietary technology and undertaking pre-clinical and clinical trials of our product candidates. These operations provide a limited basis for you to assess our ability to commercialize our product candidates and the advisability of investing in our securities.

We currently have no product revenues and may not generate revenue at any time in the near future, if at all.

To date, we have generated no product revenues. Until, and unless, we receive approval from the U.S. Food and Drug Administration, or FDA, and other regulatory authorities for our product candidates, we cannot sell our vaccines and will not have product revenues. For the foreseeable future, we will have to fund all of our operations and capital expenditures from cash on hand, licensing fees and grants, and potentially, future offerings. At the conclusion of this Offering, we believe we have cash on hand to fund our Phase II clinical trial for Non- Small Cell Lung Cancer and our Phase I clinical trial for bladder cancer. However, changes may occur that would consume our available capital before that time, including changes in and progress of our development activities, acquisitions of additional candidates and changes in regulation.

We may continue to generate operating losses and experience negative cash flows and it is uncertain whether we will achieve profitability.

For the nine months ended September 30, 2012 and September 30, 2011 (unaudited), we incurred a net loss of ($1,696,899) and ($1,541,932) respectively. For the years ended December 31, 2011 and December 31, 2010, we incurred a net loss of ($2,113,142) and ($721,844) respectively. We may continue to incur operating losses until such time, if ever, as we are able to achieve sufficient levels of revenue from operations. Our ability to achieve profitability will depend on the market acceptance of our product offerings and our capacity to develop, introduce and sell our products to our targeted markets. There can be no assurance that we will ever generate significant sales or achieve profitability. Accordingly, the extent of future losses and the time required to achieve profitability, if ever, cannot be predicted at this point.

Even if we succeed in developing and commercializing one or more product candidates, we expect to incur substantial losses for the foreseeable future and may never become profitable. We also expect to continue to incur significant operating and capital expenditures and anticipate that our expenses will increase substantially in the foreseeable future as we:

- continue to undertake pre-clinical development and clinical trials for product candidates;
- seek regulatory approvals for product candidates;
- implement additional internal systems and infrastructure; and
- hire additional personnel.

We also expect to experience negative cash flow for the foreseeable future as we fund our operating losses and capital expenditures. As a result, we will need to generate significant revenues in order to achieve and maintain profitability. We may not be able to generate these revenues or achieve profitability in the future. Our failure to achieve or maintain profitability would likely negatively impact the value of our securities and could prevent us from continuing as a going concern.

Our auditors have expressed a going concern opinion.

We have incurred net losses since inception of approximately $5,237,295, negative cash flows from operations of $4,419,113 since inception and have a working capital deficiency of ($342,496) at December 31, 2011 and ($342,223) at September 30, 2012 (unaudited) and a stockholder's deficit of ($334,098) at December 31, 2011 and ($867,383) at September 30, 2012 (unaudited). Accordingly, the opinion of our independent auditors for the years ended December 31, 2011 and December 31, 2010 is qualified subject to uncertainty as to whether we will be able to continue as a going concern. This may negatively impact our ability to obtain additional funding that we may require or to do so on terms attractive to us and may negatively impact the market price of our stock.

Our need for future financing may result in the issuance of additional securities which will cause investors to experience dilution

Our cash requirements may vary from those now planned depending upon numerous factors, including the result of future research and development activities. We believe that the proceeds derived from the sale of the shares in this Offering will provide us with sufficient working capital to fund our Phase II clinical trial for Non-Small Cell Lung Cancer and our Phase I clinical trial for bladder cancer. Thereafter, we expect to require additional funds in the future to conduct additional clinical trials even if the maximum amount is raised in this Offering. There are no other commitments by any person for future financing other than an agreement with a vendor which allows us to make up to $950,000 of payments for services rendered by such vendor through the issuance of a convertible note and a loan from Square 1 Bank for an amount up to $5,000,000; however in order to continue to borrow under the loan there are several conditions which must be met and there can be no assurance that we will meet such conditions or be able to borrow the entire $5,000,000. Through December 31, 2012, we have drawn $197,099 under the vendor note and $725,000 under our loan from Square 1 Bank. Our securities may be offered to other investors at a price lower

than the price per share offered to the investors in the Offering, or upon terms which may be deemed more favorable than offered hereunder. In addition, the issuance of securities in this Offering as well as any future financing using our securities may dilute an investor's equity ownership. Moreover, we may issue derivative securities, including options and/or warrants, from time to time, to procure qualified personnel or for other business reasons. The issuance of any such derivative securities, which is at the discretion of our Board of Directors, may further dilute the equity ownership of our stockholders, including the investors in this Offering. No assurance can be given as to our ability to procure additional financing, if required, and on terms deemed favorable to us. To the extent additional capital is required and cannot be raised successfully, we may then have to limit our then current operations and/or may have to curtail certain, if not all, of our business objectives and plans.

Until the Offering contemplated herein is consummated, we will not be able to obtain additional funding under our loan from Square 1 Bank.

The loan from Square 1 Bank, as amended, requires that we raise an additional $5,000,000 prior to December 15, 2012 and until such time as such money is raised, we will be in default under and are not able to borrow additional amounts under the loan. In addition, a default under the loan could result in the bank's foreclosure of the assets secured by the loan. We intend to use a portion of the proceeds of this offering to repay the outstanding loan from Square 1 Bank. We are currently in discussion with Square 1 Bank to extend the December 15, 2012 date; however there can be no assurance that the outcome of such discussions will be favorable.

If we do not have sufficient funds to pay the secured note when it becomes due or do not comply with the covenants in the loan documents, the note holder has the right, among other things, to foreclose upon our assets, which could force us to suspend all operations.

If we are unable to make timely monthly payments under our secured note when due, the note holder could declare the note in default and may seize the assets secured by the loan, which would result in our licenses reverting back to our licensor and force us to suspend all operations. We currently do not have the funds necessary to pay the principal amount outstanding on the note or any of our other notes. If we do not commercialize a product by the due date of the note, we will be forced to find alternative sources to repay the note.

Risks Relating to our Business

If we do not obtain the necessary U.S. or worldwide regulatory approvals to commercialize any product candidate, we will not be able to sell our product candidates

We cannot assure you that we will receive the approvals necessary to commercialize any of our product candidates or any product candidates we acquire or develop in the future. We will need FDA approval to commercialize our product candidates in the U.S. and approvals from the FDA-equivalent regulatory authorities in foreign jurisdictions to commercialize our product candidate in those jurisdictions. In order to obtain FDA approval of any product candidates, we must submit to the FDA a New Drug Application, or NDA, demonstrating that the product candidate is safe for humans and effective for its intended use. This demonstration requires significant research and animal tests, which are referred to as pre-clinical studies, as well as human tests, which are referred to as clinical trials. Satisfaction of the FDA's regulatory requirements typically takes many years, depends upon the type, complexity and novelty of the product candidate and requires substantial resources for research, development and testing. We cannot predict whether our clinical trials will demonstrate achievement of our endpoints or if the final results of our clinical trial will meet the FDA's requirements to approve product commercialization and marketing. We also cannot predict whether our research and clinical approaches will result in drugs or therapeutics that the FDA considers safe for humans and effective for indicated uses. The FDA has substantial discretion in the drug approval process and may require us to conduct additional pre-clinical and clinical testing or to perform post-marketing studies. The approval process may also be delayed by changes in government regulation, future legislation or administrative action or changes in FDA policy that occur prior to or during our regulatory review. Delays in obtaining regulatory approvals may:

- delay commercialization of, and our ability to derive product revenues from, our product candidate;
- impose costly procedures on us; and
- diminish any competitive advantages that we may otherwise believe that we hold.

Even if we comply with all FDA requests, the FDA may ultimately reject one or more of our NDAs or may not approve our manufacturing processes or facilities. We may never obtain regulatory clearance for any of our product candidates. Failure to obtain FDA approval of any of our product candidates will severely undermine our business by leaving us without a saleable product, and therefore without any source of revenues, until another product candidate can be developed. There is no guarantee that we will ever be able to develop or acquire another product candidate.

In foreign jurisdictions, we must receive approval from the appropriate regulatory authorities before we can commercialize any vaccines. Foreign regulatory approval processes generally include all of the risks associated with the FDA approval procedures described above. We cannot assure you that we will receive the approvals necessary to commercialize our product candidate for sale outside the United States.

There is uncertainty as to market acceptance of our technology and products.

We have conducted our own research into the markets for our products; however because we will be a new entrant into the market we cannot guarantee market acceptance of our products and have somewhat limited information on which to estimate our anticipated level of sales. Our products will require patients and doctors to adopt our technology. Our industry is susceptible to rapid technological developments and there can be no assurance that we will be able to match any new technological advances. If we are unable to match the technological changes in the needs of our customers the demand for our products will be reduced.

Our product candidates are in early stages of clinical trials

Because our product candidates are in early stages of development they will require extensive pre-clinical and clinical testing. Only one product candidate is currently ready for Phase II clinical trials. We cannot predict with any certainty if or when we might submit an NDA for regulatory approval for any of our product candidates or whether any such NDA will be accepted.

Clinical trials are very expensive, time-consuming and difficult to design and implement

As part of the regulatory process, we must conduct clinical trials for each product candidate to demonstrate safety and efficacy to the satisfaction of the FDA and other regulatory authorities. The number and design of the clinical trials that will be required varies depending upon product candidate, the condition being evaluated the trial results and regulations applicable to any particular product candidate. Therefore, it is difficult to accurately estimate the cost of the clinical trials. Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is also time consuming. We estimate that clinical trials of our product candidate will take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The commencement and completion of clinical trials may be delayed by several factors, including:

- unforeseen safety issues;
- determination of dosing issues;
- lack of effectiveness during clinical trials;
- slower than expected rates of patient recruitment;
- inability to monitor patients adequately during or after treatment; and
- inability or unwillingness of medical investigators to follow our clinical protocols.

In addition, we or the FDA may suspend our clinical trials at any time if it appears that we are exposing participants to unacceptable health risks or if the FDA finds deficiencies in our Investigational New Drug, or IND, submissions or the conduct of these trials. Therefore, we cannot predict with any certainty the schedule for future clinical trials.

The results of our clinical trials may not support our product candidate claims

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our product candidate claims. Success in pre-clinical testing and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the results of later clinical trials will replicate the results of prior clinical trials and pre-clinical testing. The clinical trial process may fail to demonstrate that our product candidates are safe for humans and effective for indicated uses. This failure would cause us to abandon a product candidate and may delay development of other product candidates. Any delay in, or termination of, our clinical trials will delay the filing of our NDAs with the FDA and, ultimately, our ability to commercialize our product candidates and generate product revenues. In addition, our clinical trials involve a small patient population. Because of the small sample size, the results of these clinical trials may not be indicative of future results.

Physicians and patients may not accept and use our product candidates

Even if the FDA approves one or more of our product candidates, physicians and patients may not accept and use it. Acceptance and use of our products will depend upon a number of factors including:

- perceptions by members of the health care community, including physicians, about the safety and effectiveness of our therapeutics;
- cost-effectiveness of our products relative to competing products;
- availability of reimbursement for our products from government or other healthcare payers; and
- effectiveness of marketing and distribution efforts by us and our licensees and distributors, if any.

Because we expect sales of our current product candidates, if approved, to generate substantially all of our product revenues for the foreseeable future, the failure of these therapeutics to find market acceptance would substantially harm our business and would adversely affect our revenue.

Our development program depends upon third-party researchers who are outside our control

We are dependent upon independent investigators and collaborators, such as universities and medical institutions, to conduct our pre-clinical and clinical trials under agreements with us. These collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs. These investigators may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. If outside collaborators fail to devote sufficient time and resources to our development programs, or if their performance is substandard, the approval of our FDA applications, if any, and our introduction of new product candidates, if any, will be delayed if obtained at all. These collaborators may also have relationships with other commercial entities, some of whom may compete with us. If our collaborators assist our competitors at our expense, our competitive position would be harmed.

We have little control over the direction of the NIH grant funds that have been received by the primary inventor of the technology we license and since payment is made to the inventor as opposed to us we do not recognize any revenue from such grant funds nor do they fund any expenses that we incur.

To date, in excess of $13,000,000 of funding has been awarded by the NIH to the primary inventor of the technology we license. Although earmarked for further development of the technology that we license, any funds awarded to the primary inventor are used in his discretion and we have little control over his use of the funds.

We will rely exclusively on third parties to formulate and manufacture our product candidate

We have no experience in the formulation or manufacturing of therapeutics and do not intend to establish our own manufacturing facilities. We lack the resources and expertise to formulate or manufacture our own product candidates. The supplies for our Phase I and Phase II clinical trials are currently manufactured by our cGMP contractors under current good manufacturing practices and we have entered into an agreement with one

manufacturer for the manufacture and supply of the material for our Phase III clinical trials and commercialization efforts. If any of our current product candidates or any product candidates we may develop or acquire in the future receive FDA approval, we will rely on one or more third-party contractors to manufacture our vaccines. Our anticipated future reliance on a limited number of third-party manufacturers exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA must approve any replacement contractor. This approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of FDA approval, if any.
- Our third-party manufacturers might be unable to formulate and manufacture our vaccines in the volume and of the quality required to meet our clinical needs and commercial needs, if any.
- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.
- Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Administration, and corresponding state agencies to ensure strict compliance with good manufacturing practice and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.
- If any third-party manufacturer makes improvements in the manufacturing process for our products, we may not own, or may have to share, the intellectual property rights to the innovation.

Each of these risks could delay our clinical trials, the approval, if any, of our product candidates by the FDA or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenues.

We have no experience selling, marketing or distributing products and have no internal capability to do so

We currently have no sales, marketing or distribution capabilities. We do not anticipate having the resources in the foreseeable future to allocate to the sales and marketing of our proposed products. Our future success depends, in part, on our ability to enter into and maintain collaborative relationships for such capabilities, the collaborator's strategic interest in the products under development and such collaborator's ability to successfully market and sell any such products. We intend to pursue collaborative arrangements regarding the sales and marketing of our products, however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if able to do so, that our collaborators will have effective sales forces. To the extent that we decide not to, or are unable to, enter into collaborative arrangements with respect to the sales and marketing of our proposed products, significant capital expenditures, management resources and time will be required to establish and develop an in-house marketing and sales force with technical expertise. There can also be no assurance that we will be able to establish or maintain relationships with third party collaborators or develop in-house sales and distribution capabilities. To the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, and there can be no assurance that such efforts will be successful. In addition, there can also be no assurance that we will be able to market and sell our products in the United States or overseas.

We may not be successful in establishing and maintaining strategic partnerships, which could adversely affect our ability to develop and commercialize products.

We may seek to enter into strategic partnerships in the future, including alliances with other biotechnology or pharmaceutical companies, to enhance and accelerate the development and commercialization of our products. We face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for any future product candidates and programs because our research and development pipeline may be insufficient, our product candidates and programs may be deemed to be at too early of a stage of development for collaborative effort and/or third parties may not view our product candidates and programs as having the requisite potential to demonstrate safety and efficacy. Even if we are successful in our efforts to establish

strategic partnerships, the terms that we agree upon may not be favorable to us and we may not be able to maintain such strategic partnerships if, for example, development or approval of a product candidate is delayed or sales of an approved product are disappointing.

If we ultimately determine that entering into strategic partnerships is in our best interest but either fail to enter into, are delayed in entering into or fail to maintain such strategic partnerships:

- the development of certain of our current or future product candidates may be terminated or delayed;
- our cash expenditures related to development of certain of our current or future product candidates would increase significantly and we may need to seek additional financing;
- we may be required to hire additional employees or otherwise develop expertise, such as sales and marketing expertise, for which we have not budgeted;
- we will bear all of the risk related to the development of any such product candidates;
- the competitiveness of any product candidate that is commercialized could be reduced;

To the extent we elect to enter into licensing or collaboration agreements to partner our product candidates, our dependence on such relationships may adversely affect our business.

Our commercialization strategy for certain of our product candidates may depend on our ability to enter into agreements with collaborators to obtain assistance and funding for the development and potential commercialization of these product candidates. Supporting diligence activities conducted by potential collaborators and negotiating the financial and other terms of a collaboration agreement are long and complex processes with uncertain results. Even if we are successful in entering into one or more collaboration agreements, collaborations may involve greater uncertainty for us, as we have less control over certain aspects of our collaborative programs than we do over our proprietary development and commercialization programs. We may determine that continuing a collaboration under the terms provided is not in our best interest, and we may terminate the collaboration. Our collaborators could delay or terminate their agreements, and our products subject to collaborative arrangements may never be successfully commercialized.

Further, our future collaborators may develop alternative products or pursue alternative technologies either on their own or in collaboration with others, including our competitors, and the priorities or focus of our collaborators may shift such that our programs receive less attention or resources than we would like, or they may be terminated altogether. Any such actions by our collaborators may adversely affect our business prospects and ability to earn revenues. In addition, we could have disputes with our future collaborators, such as the interpretation of terms in our agreements. Any such disagreements could lead to delays in the development or commercialization of any potential products or could result in time-consuming and expensive litigation or arbitration, which may not be resolved in our favor.

If we cannot compete successfully for market share against other drug companies, we may not achieve sufficient product revenues and our business will suffer

The market for our product candidates is characterized by intense competition and rapid technological advances. If any of our product candidates receives FDA approval, it will compete with a number of existing and future drugs and therapies developed, manufactured and marketed by others. Existing or future competing products may provide greater therapeutic convenience or clinical or other benefits for a specific indication than our products, or may offer comparable performance at a lower cost. If our products fail to capture and maintain market share, we may not achieve sufficient product revenues and our business will suffer.

We will compete against fully integrated pharmaceutical companies and smaller companies that are collaborating with larger pharmaceutical companies, academic institutions, government agencies and other public and private research organizations. Many of these competitors have oncology compounds already approved or in development.

In addition, many of these competitors, either alone or together with their collaborative partners, operate larger research and development programs or have substantially greater financial resources than we do, as well as significantly greater experience in:

- developing drugs and therapies;
- undertaking pre-clinical testing and human clinical trials;
- obtaining FDA and other regulatory approvals of drugs and therapies;
- formulating and manufacturing drugs and therapies; and
- launching, marketing and selling drugs and therapies.

We have limited protection of our intellectual property.

We intend to rely on a combination of common law copyright, patent, trademark, and trade secret laws and measures to protect our proprietary information. We have obtained exclusive rights to license the technology for which patent protection has been obtained; however such protection does not prevent unauthorized use of such technology. Trademark and copyright protections may be limited, and enforcement could be too costly to be effective. It may also be possible for unauthorized third parties to copy aspects of, or otherwise obtain and use, our proprietary information without authorization, including, but not limited to, product design, software, customer and prospective customer lists, trade secrets, copyrights, patents and other proprietary rights and materials. Other parties can use and register confusingly similar business, product and service names, as well as domain names, which could divert customers, resulting in a material adverse effect on our business, operating results and financial condition.

If we fail to successfully enforce our intellectual property rights, our competitive position could suffer, which could harm our operating results. Competitors may challenge the validity or scope of our patents or future patents we may obtain. In addition, our licensed patents may not provide us a meaningful competitive advantage. We may be required to spend significant resources to monitor and police our licensed intellectual property rights. We may not be able to detect infringement and our competitive position may be harmed. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture market share.

The technology we license may be found to infringe third-party intellectual property rights.

Third parties may in the future assert claims or initiate litigation related to their patent, copyright, trademark and other intellectual property rights in technology that is important to us. The asserted claims and/or litigation could include claims against us, our licensors or our suppliers alleging infringement of intellectual property rights with respect to our products or components of those products. Regardless of the merit of the claims, they could be time consuming, result in costly litigation and diversion of technical and management personnel, or require us to develop a non-infringing technology or enter into license agreements. We cannot assure you that licenses will be available on acceptable terms, if at all. Furthermore, because of the potential for significant damage awards, which are not necessarily predictable, it is not unusual to find even arguably unmeritorious claims resulting in large settlements. If any infringement or other intellectual property claim made against us by any third party is successful, or if we fail to develop non-infringing technology or license the proprietary rights on commercially reasonable terms and conditions, our business, operating results and financial condition could be materially adversely affected.

If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and we may have to:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- abandon an infringing drug or therapy candidate;
- redesign our products or processes to avoid infringement;
- stop using the subject matter claimed in the patents held by others;

- pay damages; or
- defend litigation or administrative proceedings which may be costly whether we win or lose, and which could result in a substantial diversion of our financial and management resources.

We rely on licenses to use various technologies that are material to our business.

We have licensing agreements with certain universities granting us the right to use certain critical intellectual property. The terms of the licensing agreements continues until the end of the life of the last patent to expire. If we breach the terms of the agreements, including failure to make payments or failure to reach certain milestones, the licensor has the right to terminate the license. If we fail to make the payments under these licenses or if we lose or cannot maintain them on acceptable terms, it would halt our ability to market our products and technology, which would have a material adverse effect on our business, operating results and financial condition. For the years ended December 31, 2012, 2013, 2014, 2015, 2016 and thereafter our minimum royalty obligations under these licenses are $30,000, $50,000, $50,000, $60,000, $60,000 and $760,000, respectively.

Our ability to generate product revenues will be diminished if our therapies sell for inadequate prices or patients are unable to obtain adequate levels of reimbursement

Our ability to commercialize our vaccines, alone or with collaborators, will depend in part on the extent to which reimbursement will be available from:

- government and health administration authorities;
- private health maintenance organizations and health insurers; and
- other healthcare payers.

Significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Healthcare payers, including Medicare, are challenging the prices charged for medical products and services. Government and other healthcare payers increasingly attempt to contain healthcare costs by limiting both coverage and the level of reimbursement for drugs and therapeutics. Even if one of our product candidates is approved by the FDA, insurance coverage may not be available, and reimbursement levels may be inadequate, to cover such vaccines. If government and other healthcare payers do not provide adequate coverage and reimbursement levels for one of our products, once approved, market acceptance of such product could be reduced.

We may not successfully effect our intended expansion

Our success will depend upon the expansion of our operations and the effective management of our growth, which will place a significant strain on our management and on our administrative, operational and financial resources. To manage this growth, we must expand our facilities, augment our operational, financial and management systems and hire and train additional qualified personnel. If we are unable to manage our growth effectively, our business would be harmed.

We may be exposed to liability claims associated with the use of hazardous materials and chemicals

Our research and development activities may involve the controlled use of hazardous materials and chemicals. Although we believe that our safety procedures for using, storing, handling and disposing of these materials comply with federal, state and local laws and regulations, we cannot completely eliminate the risk of accidental injury or contamination from these materials. In the event of such an accident, we could be held liable for any resulting damages and any liability could materially adversely affect our business, financial condition and results of operations. In addition, the federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of hazardous or radioactive materials and waste products may require us to incur substantial compliance costs that could materially adversely affect our business, financial condition and results of operations.

We rely on key executive officers and scientific and medical advisors, and their knowledge of our business and technical expertise would be difficult to replace

We are highly dependent on our principal scientific, regulatory and medical advisors and our chief executive officer. We do not have "key person" life insurance policies for any of our officers or advisors. The loss of the technical knowledge and management and industry expertise of any of our key personnel could result in delays in product development, loss of customers and sales and diversion of management resources, which could adversely affect our operating results.

If we are unable to hire additional qualified personnel, our ability to grow our business may be harmed

We will need to hire additional qualified personnel with expertise in pre-clinical testing, clinical research and testing, government regulation, formulation and manufacturing and sales and marketing. In particular, over the next 12 months, we expect to hire up to 10 new employees. We compete for qualified individuals with numerous biopharmaceutical companies, universities and other research institutions. Competition for such individuals is intense, and we cannot be certain that our search for such personnel will be successful. Attracting and retaining qualified personnel will be critical to our success.

Certain of our officers may have a conflict of interest.

Some of our officers are currently working for the Company on a part-time basis. Several of the part-time employees also work at other jobs and have discretion to decide what time they devote to our activities, which may result in a lack of availability when needed due to responsibilities at other jobs. We expect that some of these officers may join the Company on a full-time basis at the completion this Offering, but there can be no assurance given that any or all of our officers will be so employed.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits

The testing and marketing of medical products entail an inherent risk of product liability. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our products which could impact our ability to continue as a going concern. Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of pharmaceutical products we develop, alone or with collaborators.

We have adopted certain measures that may have anti-takeover effects which may make an acquisition of our Company by another company more difficult.

We have adopted, and may in the future adopt, certain measures that may have the effect of delaying, deferring or preventing a takeover or other change in control of our Company that a holder of our Common Stock might not consider in its best interest. These measures include:

- classified Board of Directors; and
- certain certificate of incorporation and bylaws provisions.

Our Board of Directors is divided into three classes with each class serving a staggered three-year term. The existence of a classified board will make it more difficult for our shareholders to change the composition (and therefore the policies) of our Board of Directors in a relatively short period of time.

We have adopted certain certificate of incorporation and bylaws provisions which may have anti-takeover effects. These include: (a) classifying our board; (b) requiring that certain shareholder groups elect a certain number of directors; (c) requiring a majority of each of the Series A Preferred shareholders, the Series 1 Preferred shareholders and the common shareholders to approve certain actions including amendments to our bylaws or certificate of incorporation, creation of additional classes of stock or increases in the authorized shares of an existing class of stock unless they rank junior to the Series A Preferred stock with respect to the distribution of assets on liquidation and the payment of dividends, reclassification stock or redemption of stock; and (d) providing that directors may be

removed only for "cause." These measures and those described above may have the effect of delaying, deferring or preventing a takeover or other change in control of the Company that a holder of our Common Stock might consider in its best interest.

In addition, we are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a Delaware corporation from engaging in any business combination, including mergers and asset sales, with an interested stockholder (generally, a 15% or greater stockholder) for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. The operation of Section 203 may have anti-takeover effects, which could delay, defer or prevent a takeover attempt that a holder of our Common Stock might consider in its best interest.

Risks Related to this Offering

Upon the sale of the shares offered in this Prospectus, our Preferred Stock will convert into shares of Common Stock.

Holders of our Preferred Stock have several rights that our common shareholders do not have such as preference on payment of dividends and liquidation distributions, the right to elect a certain number of directors, the right to adjustment in the event that securities are issued at a price per share less than that paid by the holders of the Preferred Stock. Our Second Amended and Restated Certificate of Incorporation provides that our Preferred Stock automatically converts to Common Stock upon the closing of a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933 resulting in at least $10,000,000 of proceeds to us. Upon the conversion of the Preferred Stock the holders of Common Stock will experience additional dilution.

Coalitions of a few of our officers and directors have sufficient voting power to make corporate governance decisions that could have a significant effect on us and the other stockholders.

Our officers and directors together will control approximately 53% of our outstanding Common Stock on a fully diluted basis after consummation of this Offering assuming the issuance of all 3,000,000 shares Common Stock offered in this Offering. Mr. Wolf alone through his direct and indirect holdings will control approximately 33% of our outstanding Common Stock on a fully diluted basis after consummation of this Offering assuming the issuance of all 3,000,000 shares of Common Stock offered in this Offering. As a result, Mr. Wolf, alone will be able to exert a significant degree of influence over our management and affairs and over matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. In addition, this concentration of ownership may delay or prevent a change in our control and might affect the market price of our Common Stock, even when a change in control may be in the best interest of all stockholders. Furthermore, the interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. Accordingly, these stockholders could cause us to enter into transactions or agreements that we would not otherwise consider.

The possible issuance of Common Stock subject to options and warrants may dilute the interest of stockholders.

In 2009, we adopted a 2009 Stock Option and Restricted Stock Plan under which we may grant awards to purchase 1,700,000 shares of our Common Stock, of which, 1,414,564 options were outstanding as of November 30, 2012. In addition, we have 229,781 shares of stock issued under our Plan which are restricted. In addition, as of November 30, 2012, we have 122,262 shares issuable upon exercise of warrants granted to third parties in connection with prior private placements of our equity securities and debt. To the extent that outstanding stock options and warrants are exercised, or additional securities are issued, dilution to the interests of our stockholders may occur. Moreover, the terms upon which we will be able to obtain additional equity capital may be adversely affected since the holders of the outstanding options can be expected to exercise them at a time when we would, in all likelihood, be able to obtain any needed capital on terms more favorable to us than those provided in such outstanding options.

We have additional securities available for issuance, which, if issued, could adversely affect the rights of the holders of our Common Stock.

Our Certificate of Incorporation authorizes the issuance of 50,000,000 shares of our Common Stock and 2,112,500 shares of Preferred Stock. The Common Stock and Preferred Stock, as well as the awards available for issuance under the 2009 Stock Option and Restricted Stock Plan, can be issued by our Board of Directors, without stockholder approval. Any future issuances of such stock would further dilute the percentage ownership of us held by holders of Preferred Stock and Common Stock. The classes of Preferred Stock that are currently outstanding, which will convert to common stock upon consummation of this Offering, rank ahead of our Common Stock in terms of dividends, liquidation rights and voting rights and could adversely affect the voting power and the rights of our holders of Common Stock. In addition, the issuance of Preferred Stock may be used as an "anti-takeover" device without further action on the part of our stockholders, and may adversely affect the holders of the Common Stock.

We have never paid dividends and have no plans to pay dividends in the future.

Holders of shares of our Common Stock are entitled to receive such dividends as may be declared by our Board of Directors. To date, we have paid no cash dividends on our shares of our Preferred or Common Stock and we do not expect to pay cash dividends in the foreseeable future. We intend to retain future earnings, if any, to provide funds for operations of our business. Therefore, any return investors in our Preferred or Common Stock may have will be in the form of appreciation, if any, in the market value of their shares of Common Stock. See "Dividend Policy."

Shareholders purchasing shares in this Offering will experience immediate and substantial dilution, causing their investment to immediately be worth less than their purchase price.

If you purchase Common Stock in this Offering, you will experience an immediate and substantial dilution in the projected book value of the Common Stock from the price you pay in this Offering.

The following represents your dilution after consummation of this Offering assuming the consummation of this Offering and conversion of all of the outstanding preferred stock exclusive of the over-allotment option, you will have an immediate dilution of $ per common share and an immediate increase in net tangible book value to our present shareholders from $ to $ per share will occur.

We are an "emerging growth company," and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our Common Stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act enacted in April 2012, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, not being required to comply with any new requirements adopted by the Public Company Accounting Oversight Board, or the PCAOB, requiring mandatory audit firm rotation or a supplement to the auditor's report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer, not being required to comply with any new audit rules adopted by the PCAOB after April 5, 2012 unless the SEC determines otherwise, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could remain an emerging growth company until the earliest of : (i) the last day of the fiscal year in which we have total annual gross revenues of $1 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of our first sale of common equity securities pursuant to an effective registration statement; (iii) the date on which we have issued more than $1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer. We cannot predict if investors will find our Common Stock less attractive if we choose to rely on these exemptions. If some investors find our Common Stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our Common Stock and our stock price may be more volatile. Further, as a result of these scaled regulatory requirements, our disclosure may be more limited than that of other public companies and you may not have the same protections afforded to shareholders of such companies.

Under Section 107(b) of the Jumpstart Our Business Startups Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

As a result of our becoming a public company, we will become subject to additional reporting and corporate governance requirements that will require additional management time, resources and expense.

In connection with this filing, we will become obligated to file with the U.S. Securities and Exchange Commission annual and quarterly information and other reports that are specified in the U.S. Securities Exchange Act of 1934. We will also become subject to other reporting and corporate governance requirements under the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated thereunder, all of which will impose significant compliance and reporting obligations upon us and require us to incur additional expense in order to fulfill such obligations.

We have identified material weaknesses in our internal controls, and we cannot provide assurances that these weaknesses will be effectively remediated or that additional material weaknesses will not occur in the future. If our internal control over financial reporting or our disclosure controls and procedures are not effective, we may not be able to accurately report our financial results, prevent fraud, or file our periodic reports in a timely manner, which may cause investors to lose confidence in our reported financial information and may lead to a decline in our stock price.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended, or the Exchange Act. We have historically operated as a private company and the number and qualifications of our finance and accounting staff have not been consistent with those of a public company. We have identified material weaknesses in our internal controls with respect to our financial statement closing process of our consolidated financial statements for the years ended December 31, 2010 and 2011 for the nine months ended September 30, 2012. Our management discovered certain conditions that we deemed to be material weaknesses and significant deficiencies in our internal controls, as follows:

- A lack of accounting and finance resources as well as effective oversight by those in charge of governance resulted in insufficient controls over timely financial statement preparation and review as well as the preparation and review around accounting for certain complex transactions.
- The design of monitoring controls used to assess the design and operating effectiveness of our internal controls is inadequate. We also do not have an adequate internal process to report deficiencies in internal control to management on a timely basis.

We have begun to take actions that we believe will substantially remediate the material weaknesses identified. In response to the identification of our material weaknesses, we (i) intend to hire additional finance and accounting personnel, (ii) are in the process of establishing a review process for key aspects of our financial reporting process, including the accounting for complex transactions, and (iii) will seek to establish better operating controls and involve our board of directors in our internal controls process, which will involve establishing formal procedures to communicate deficiencies in internal controls on a timely basis, and encourage our board of directors to more actively participate in guiding management as it relates to internal controls matters. However, we cannot assure you that our internal control over financial reporting, as modified, will enable us to identify or avoid material weaknesses in the future. Regardless, following the completion of this offering we will be required to expend time and resources to further improve our internal controls over financial reporting, including by expanding our finance and accounting staff.

Future sales of our Common Stock by our existing shareholders could cause our stock price to decline.

The Company will have a significant number of restricted shares that will become eligible for sale shortly after this registration statement is declared effective. We currently have 4,218,448 shares of our Common Stock outstanding, all of which are restricted securities. The shares being registered herein 3,000,000 shares will be eligible for sale immediately upon the effectiveness of this registration statement. All of the remaining shares will be eligible for resale under Rule 144 within ninety days of us being a reporting company under Section 13 or 15 of the Securities Exchange Act of 1934 (the "Exchange Act"); however 4,653,484 will be held by affiliates and will be subject to the limitations described under "Shares Eligible For Future Sale." It is conceivable that following the holding period, many shareholders may wish to sell some or all of their shares. If our shareholders sell substantial amounts of our Common Stock in the public market at the same time, the market price of our Common Stock could decrease significantly due to an imbalance in the supply and demand of our Common Stock. Even if they do not actually sell the stock, the perception in the public market that our shareholders might sell significant shares of our Common Stock could also depress the market price of our Common Stock.

A decline in the price of shares of our Common Stock might impede our ability to raise capital through the issuance of additional shares of our Common Stock or other equity securities, and may cause you to lose part or all of your investment in our shares of Common Stock.

Our lack of an independent audit committee and audit committee financial expert at this time may hinder our board of directors' effectiveness in fulfilling the functions of the audit committee without undue influence from management and until we establish such committee will prevent us from obtaining a listing on a national securities exchange.

Although our Common Stock is not listed on any national securities exchange, for purposes of independence we use the definition of independence applied by NASDAQ. Currently, we have no independent audit committee nor do we have an audit committee financial expert at this time. Our full board of directors functions as our audit committee and is comprised of five directors, two of whom are not considered to be "independent" in accordance with the requirements set forth in NASDAQ Listing Rule 5605(a)(2). An independent audit committee plays a crucial role in the corporate governance process, assessing our Company's processes relating to our risks and control environment, overseeing financial reporting, and evaluating internal and independent audit processes. The lack of an independent audit committee may prevent the board of directors from being independent from management in its judgments and decisions and its ability to pursue the responsibilities of an audit committee without undue influence. We may have difficulty attracting and retaining directors with the requisite qualifications. If we are unable to attract and retain qualified, independent directors, the management of our business could be compromised. In addition, no director on our board of directors is considered to be a "financial expert". An independent audit committee is required for listing on any national securities exchange, therefore until such time as we have an independent audit committee we will be ineligible for listing on any national securities exchange.

Limitations on director and officer liability and indemnification of our Company's officers and directors by us may discourage stockholders from bringing suit against an officer or director.

Our Company's certificate of incorporation and bylaws provide, with certain exceptions as permitted by governing state law, that a director or officer shall not be personally liable to us or our stockholders for breach of fiduciary duty as a director or officer, except for acts or omissions which involve intentional misconduct, fraud or knowing violation of law, or unlawful payments of dividends. These provisions may discourage stockholders from bringing suit against a director or officer for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director or officer.

We are responsible for the indemnification of our officers and directors.

Should our officers and/or directors require us to contribute to their defense, we may be required to spend significant amounts of our capital. Our certificate of incorporation and bylaws also provide for the indemnification of our directors, officers, employees, and agents, under certain circumstances, against attorney's fees and other expenses incurred by them in any litigation to which they become a party arising from their association with or activities on behalf of our Company. This indemnification policy could result in substantial expenditures, which we may be unable to recoup. If these expenditures are significant, or involve issues which result in significant liability for our key personnel, we may be unable to continue operating as a going concern.

Our Common Stock may be thinly traded, so you may be unable to sell at or near ask prices or at all if you need to sell your shares to raise money or otherwise desire to liquidate your shares.

Prior to this offering, you could not buy or sell our Common Stock publicly. We cannot predict the extent to which investors' interests will lead to an active trading market for our Common Stock or whether the market price of our Common Stock will be volatile following this offering. If an active trading market does not develop, investors may have difficulty selling any of our Common Stock that they buy. There may be limited market activity in our stock and we are likely to be too small to attract the interest of many brokerage firms and analysts. We cannot give you any assurance that a public trading market for our Common Stock will develop or be sustained. The market price of our Common Stock could be subject to wide fluctuations in response to quarterly variations in our revenues and operating expenses, announcements of new products or services by us, significant sales of our Common Stock, including "short" sales, the operating and stock price performance of other companies that investors may deem comparable to us, and news reports relating to trends in our markets or general economic conditions.

The offering price of the shares may not be indicative of the value of our assets or the price at which shares can be resold.

The offering price of the Common Stock may not be an indication of our actual value. Prior to this Offering, there has been no public market for our securities. The offering price of $ per share was determined based upon negotiations between the Underwriter and us. Factors considered in determining such price in addition to prevailing market conditions include an assessment of our future prospects, an increase in value of our stock due to becoming a public company and prior valuations of certain minority interests prepared for us. Such price does not have any relationship to any established criteria of value, such as book value or earnings per share. Such price is not indicative of the current market value of our assets. No assurance can be given that the shares can be resold at the public offering price.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of 3,450,000 shares of our common stock in this offering will be approximately ____ million, assuming an initial public offering price of $____per share, which is the midpoint of the price range listed on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the Underwriter exercises its over-allotment option in full, we estimate that the net proceeds from this offering will be approximately $___ million, based on an assumed initial public offering price of $____ per share, which is the midpoint of the price range listed on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the assumed initial public offering price of $___ per share would increase (decrease) the net proceeds from this offering by approximately _____, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for clinical development of HS-110 and HS-410, repayment of debt and other general corporate purposes:

- **HS-110.** We plan to initiate a 300 patient Phase II trial on patients advanced non-small cell lung cancer immediately upon completion of this Offering. Our Phase II study has been designed as a maintenance therapy study in patients with Stage III/IV NSCLC who have completed a 1st line regimen consisting of a platinum doublet, crizotinib or erlotinib and achieved at least stable disease. We plan to use approximately $10 million from the proceeds of this Offering to finance this trial.

- HS-410. We plan to file an IND for use of HS-410 to prevent the recurrence of bladder cancer This initial IND will include a 93 patient, Phase I/II trial to examine safety, tolerability, immune response and preliminary clinical activity of HS-410 in patients with high risk, superficial bladder cancer who have completed surgical resection and 6 weekly intravesical bacillus Calmet-Guerin (BCG) immunotherapy installations. We plan to use approximately $3.5 million from the proceeds of this Offering to finance this trial.

- Repayment of debt. We plan to use approximately $300,000 of the proceeds of this offering to repay the portion of the loan from Square 1 Bank that is due and payable in the next eighteen months. The loan from Square 1 Bank is payable as interest only until August 7, 2013 and then is payable in 36 monthly installments of principal and interest. As of December 31, 2012, we had borrowed $725,000 under the Square 1 Bank loan.

- The remaining proceeds will be used for general corporate purposes

The expected use of the net proceeds from this Offering represents our current intentions based on our present plans and business conditions. As of the date of this Prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received from this Offering. The amounts and timing of our actual expenditures will depend on numerous factors including the progress in, and costs of, our clinical trials and other preclinical development programs. Accordingly, our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of management regarding the application of the net proceeds from the Offering. We may find it necessary or advisable to reallocate the net proceeds of this Offering; however any such reallocation would be substantially limited to the categories set forth above to use the net proceeds for other purposes; however substantial. Pending such uses set forth above, we plan to invest the net proceeds in highly liquid, investment grade securities. We believe that the proceeds derived from the sale of the maximum number of shares in this Offering will provide us with sufficient working capital to fund our Phase II clinical trial for Non-Small Cell Lung Cancer and our Phase I clinical trial for bladder cancer.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock and we do not currently intend to pay any cash dividends on our Preferred or Common Stock in the foreseeable future. We expect to retain all available funds and future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends, if any, on our Common Stock will be at the discretion of our Board of Directors and will depend on, among other factors, our results of operations, financial condition, capital requirements and contractual restrictions.

DETERMINATION OF OFFERING PRICE

Prior to this Offering, there has been no public market for our securities. The offering price of $ per share was determined based upon negotiations between the Underwriter and us. Factors considered in determining such price in addition to prevailing market conditions include an assessment of our future prospects, an increase in value of our stock due to becoming a public company and prior valuations of certain minority interests prepared for us. Such price does not have any relationship to any established criteria of value, such as book value or earnings per share. Such price is not indicative of the current market value of our assets. No assurance can be given that the shares can be resold at the public offering price.

DILUTION

If you invest in our common stock in this offering, your ownership interest in us will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock after this offering. Dilution results from the fact that the per share offering price of the common stock is substantially in excess of the book value per share attributable to the shares of common stock held by existing stockholders.

Our net tangible book value as of September 30 2012 (unaudited) was approximately $867,383, or $ per share of our common stock. We calculate net tangible book value per share by taking the amount of our total tangible assets, reduced by the amount of our total liabilities, and then dividing that amount by the total number of shares of common stock outstanding.

After giving effect to our sale of the shares in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range described on the cover of this prospectus, and after deducting estimated underwriting discounts and commissions and offering expenses payable by us, our adjusted net tangible book value on September 30, 2012 would have been $ million, or $ per share of our common stock. This amount represents an immediate increase in net tangible book value (or a decrease in net tangible book deficit) of $ per share to existing stockholders and an immediate and substantial dilution in net tangible book value of $ per share to new investors purchasing shares in this offering at the assumed initial public offering price.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share	$
Net tangible book value (deficit) per share as of September 30, 2012	
Increase in tangible book value per share attributable to new investors	
Adjusted net tangible book value (deficit) per share after this offering	
Dilution per share to new investors	$

Dilution is determined by subtracting adjusted net tangible book value per share of common stock after the offering from the initial public offering price per share of common stock.

If the underwriters exercise in full their option to purchase additional shares, the adjusted tangible book value per share after giving effect to the offering would be $ per share. This represents an increase in adjusted net tangible book value (or a decrease in net tangible book value deficit) of $ per share to the existing stockholders and dilution in adjusted net tangible book value of $ per share to new investors.

Assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting discounts and commissions and offering expenses payable by us, a $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the range set forth on the cover of this prospectus, would increase or decrease the net tangible book value attributable to new investors purchasing shares in this offering by $ per share and the dilution to new investors by $ per share and increase or decrease the adjusted net tangible book value per share after offering by $ per share.

The following table summarizes, as of September 30, 2012, the differences between the number of shares purchased from us, the total consideration paid to us, and the average price per share paid by existing stockholders and by new investors. As the table shows, new investors purchasing shares in this offering will pay an average price per share substantially higher than our existing stockholders paid. The table below assumes an initial public offering price of $ per share, the midpoint of the range set forth on the cover of this prospectus, for shares purchased in this offering and excludes underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Average
	Number	Percent	Amount	Percent	Price Per Share
Existing stockholders					
New investors					
Total					

If the underwriters were to fully exercise the underwriters' option to purchase additional shares of our common stock, the percentage of shares of our common stock held by existing stockholders who are directors, officers or affiliated persons would be % and the percentage of shares of our common stock held by new investors would be %. Assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting discounts and commissions and offering expenses payable by us, a $_____ increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the range set forth on the cover of this prospectus, would increase or decrease total consideration paid by new investors and total consideration paid by all stockholders by approximately $ million.

To the extent that we grant options to our employees in the future and those options are exercised or other issuances of common stock are made, there will be further dilution to new investors.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our audited annual consolidated financial statements and the related notes that appear elsewhere in this Prospectus. This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. Actual results may differ materially from those discussed in these forward-looking statements due to a number of factors, including those set forth in the section entitled "Risk Factors" and elsewhere in this Prospectus.

Overview

We are a clinical-stage biopharmaceutical company engaged in the development of novel allogeneic, "off-the-shelf" cellular therapeutic vaccines to combat a wide range of cancers and infectious diseases. Our proprietary *ImPACT*™ cancer therapy delivers live, genetically-modified, irradiated human cells which are "reprogrammed" to "pump out" a broad spectrum of cancer associated antigens together with a potent immune adjuvant called "gp96" to educate and activate a cancer patient's immune system to recognize and kill cancerous cells. The secreted antigen-adjuvant complexes generate potent anti-cancer immune responses in patients by mobilizing and activating killer T cells that target multiple cancer antigens, thus harnessing a patient's own immune system to fight cancer. In an 18 patient phase I clinical trial in non-small cell lung cancer patients (NSCLC) in which 15 patients remained at the end of the trial and were evaluated, our "off-the-shelf" therapeutic vaccine candidate HS-110 generated potent anti-cancer immune responses in 11 patients (including the mobilization and activation of killer T cells against multiple cancer antigens), was well tolerated and demonstrated preliminary indications of clinical efficacy.

As an "off-the-shelf" therapeutic vaccine, *ImPACT* uses a common master cell line to mass-produce a single vaccine product applicable to all patients for each particular cancer type, thus providing a traditional biopharmaceutical approach to deliver pan-antigen immunotherapy with logistical, manufacturing and cost of goods benefits compared to autologous patient-specific approaches.

We are in the process of initiating a Phase II clinical trial in non-small cell lung cancer (NSCLC) with our therapeutic vaccine candidate HS-110, which is derived from a genetically-modified human lung cancer cell line. The results of our recently completed Phase I clinical trial in lung cancer patients demonstrated that HS-110 was well tolerated with minimal to no indications of treatment-related toxicity with positive correlations between levels of observed immune responses and therapeutic efficacy. Specifically, the trial demonstrated a response rate of 73%[2] and a median survival of 16.5 months for immune responders, versus a median survival of 4.5 months for immune non-responders. These findings were consistent with those of our multiple pre-clinical published studies.

We have also developed *ImPACT* therapeutic vaccines for bladder cancer, breast cancer and ovarian cancer. We plan to initiate a Phase I/II clinical trial for bladder cancer in mid 2013 with HS-410, a genetically-modified bladder cancer cell line. To date, in excess of $13,000,000 of funding has been awarded to the primary inventor of the technology that we license by the National Institutes of Health (NIH) and through other research and clinical grant in order to fund development of the technology that we license. We have little control over the direction of the NIH grant funds that have been received by the primary inventor of the technology we license and since payment is made to the inventor as opposed to us we do not recognize any revenue from such grant funds nor do they fund any expenses that we incur. Although earmarked for further development of the technology that we license, any funds awarded to the primary inventor are used in his discretion and we have little control over his use of the funds.

Critical Accounting Policies

Use of estimates
The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

The Company recognizes government grants when there is reasonable assurance that they will comply with the conditions attached to the grants and that the grants will be received. The grants are recognized using an income approach and grant revenue is recognized as the related expenses are incurred.

Stock Based Compensation

The Company accounts for stock-based compensation arrangements with employees and non-employee directors using a fair value method which requires the recognition of compensation expense for costs related to all stock-based payments, including stock options. The fair value method requires the Company to estimate the fair value of stock-based payment awards on the date of grant using an option pricing model. Stock-based compensation costs are based on the fair value of the underlying option calculated using the Black Scholes option-pricing model on the date of grant for stock options and recognized as expense on a straight-line basis over the requisite service period, which is the vesting period. Determining the appropriate fair value model and related assumptions requires judgment, including estimating stock price volatility, forfeiture rates and expected term. The expected volatility rates are estimated based on the actual volatility of comparable public companies over the expected term. The expected term for the years ended December 31, 2011 and 2010 and the nine month periods ended September 30, 2012 and 2011 represents the average time that options are expected to be outstanding based on the mid-point between the vesting date and the end of the contractual term of the award. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company has not paid dividends and does not anticipate paying a cash dividend in the foreseeable future and, accordingly, uses an expected dividend yield of zero. The risk-free interest rate is based on the rate of U.S. Treasury securities with maturities consistent with the estimated expected term of the awards. The measurement of nonemployee share-based compensation is subject to periodic adjustments as the underlying equity instruments vest and is recognized as an expense over the period over which services are received.

The fair value of the common stock underlying our stock options was determined at each grant date by our board of directors and supported by periodic independent third-party valuations. Our board of directors intended all options to be exercisable at a price per share not less than the per share price fair value of our common stock underlying those options on the date of grant. The valuations of our common stock were determined in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation.* For grants of stock awards made on dates for which there was no valuation performed by a valuation specialist, our board of directors determined the fair value of our common stock on the date of grant based upon the immediately preceding valuation and other pertinent information (such as significant changes in the Company's activities) available at the time of grant.

We have granted stock options during the period from January 1, 2011 through December 31, 2012 as summarized below:

Option Grant Dates:	Number of Options Granted	Exercise Price Per Share	Common Stock Fair Value Per Share At Grant Date	Fair Value Per Option
April 7, 2011	29,000	$0.28	$0.28	$0.1677
April 7, 2011	250,000	$0.31	$0.28	$0.1379
April 12, 2011	362,250	$0.28	$0.28	$0.1707
October 25, 2011	48,000	$0.28	$0.33	$0.1886
October 25, 2011	15,000	$0.28	$0.33	$0.2036
October 25, 2011	50,000	$0.28	$0.28	$0.1677
November 22, 2011	50,000	$0.28	$0.28	$0.1770
April 25, 2012	225,595	$0.33	$0.33	$0.1894
April 25, 2012	5,000	$0.33	$0.33	$0.1968
May 30, 2012	3,000	$0.33	$0.33	$0.1968
November 8, 2012	177,500	$0.33	$0.33	$0.1968

Two valuations were performed by an independent valuation specialist on March 31, 2011 and March 31, 2012.

To determine the fair value of our common stock, the Company considered three enterprise value allocation methods consistent with the American Institute of Certified Public Accountants Practice Aid, "Valuation of Privately-Held Company Equity Securities Issued as Compensation." These methods are: (i) current-value method, (ii) the option pricing method and (iii) the probability-weighted expected return method. Under the option pricing method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the liquidation preference at the time of a liquidity event. The option-pricing method uses the Black-Scholes option model to price the call options. After considering several factors and circumstances, the Company utilized the option pricing backsolve method. The option pricing backsolve method treats common stock and preferred stock as call options on the enterprise/equity value, with exercise prices based on the liquidation preference of the preferred stock.

In order to estimate the fair value of the equity as of March 31, 2011, the Company did an option pricing backsolve method based on the recently issued convertible note. In May 2010 and September 2010, the Company completed the issuance of convertible promissory notes with an unrelated party which was considered to be at "arms-length." The Company estimated the implied equity value to be approximately $3.4 million as of March 31, 2011. After consideration of specific facts and circumstances, the Board of Directors and Management assumed a 3.5 years to a liquidity event. The anticipated timing and probability of a liquidity event was based on then-current plans and estimates of our Board of Directors and Management regarding a liquidity event. Furthermore, volatility was estimated based on 3.5-year historical volatility of peer companies. To derive the value of the common stock, the proceeds to the common stockholders were calculated based on the preferences and priorities of the preferred and common stock, including the participation features of certain series of the preferred shares. A discount for lack of marketability was applied to reflect the risk arising from the inability to readily sell the shares. After applying suitable discounts for lack marketability, we concluded the fair value of the common stock of the Company on a minority, non-marketable basis to be $0.28 per share.

To determine the fair value of our common stock as of March 31, 2012, the Company considered two scenarios based on the specific facts and circumstances of the Company as of March 31, 2012. As of March 31, 2012, the Company had specific needs of cash in order to continue operations. As such, the Company was planning a series B round of financing. Based on the specific facts and circumstances, the first scenario assumes the Company will raise the Series B round of financing ("Going Concern") and the second scenario assumes the Company will liquidate in the next three months ("Liquidation Scenario").

Under the first scenario, the fair value of the common stock was determined by applying the option pricing backsolve method. A 3.5-year to liquidity was assumed by Management and the Board of Directors based on the anticipated timing and probability of a liquidity event. Volatility was assumed based on historical volatility of peer companies. In order to estimate the implied equity value, the Company assumed terms and conditions based on the Series B round of financing. An Option pricing backsolve method was applied to determine the value of the equity based on the anticipated Series B round of financing, which was expected to occur during the latter half of 2012 with an unrelated investor. Under the second scenario, the fair value of the common stock was determined by applying the current method given the immediate liquidity event. Management and Board of Directors assumed that the Company will liquidate in the next three months. Given the facts and circumstances, we assumed that there would be no proceeds available for distribution to the common stockholders, indicating the fair value of the common stock to be zero. After considering both scenarios, a weighted average of the current value approach and the OPM was calculated to estimate the fair value of the common stock as of March 31, 2012. A discount for lack of marketability was applied to reflect the increased risk arising from the inability to readily sell the shares. After applying suitable discounts for lack marketability present in the common stock, we concluded the fair value of the common stock of the Company on a minority, non-marketable basis to be $0.33 per share.

On April 7, 2011, the Company granted stock options to purchase a total of 14,000 and 250,000 shares at an exercise price of $0.28 and $0.31, respectively. The Company determined that the fair value of the common stock on the date of grant was $0.28 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2011 that indicated a valuation price of $0.28 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2011 to April 7, 2011.

On April 12, 2011, the Company granted stock options to purchase a total of 326,250 shares at an exercise price of $0.28. The Company determined that the fair value of the common stock on the date of grant was $0.28 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2011 that indicated a valuation price of $0.28 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2011 to April 12, 2011.

On October 25, 2011, the Company granted stock options to purchase a total of 113,000 shares at an exercise price of $0.28. The Company determined that the fair value of the common stock on the date of grant was $0.28 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2011 that indicated a valuation price of $0.28 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2011 to October 25, 2011.

On November 22, 2011, the Company granted stock options to purchase a total of 50,000 shares at an exercise price of $0.28. The Company determined that the fair value of the common stock on the date of grant was $0.28 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2011 that indicated a valuation price of $0.28 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2011 to November 22, 2011.

On April 25, 2012, the Company granted stock options to purchase a total of 230,595 shares at an exercise price of $0.33. The Company determined that the fair value of the common stock on the date of grant was $0.33 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2012 that indicated a valuation price of $0.33 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2012 to April 25, 2012.

On May 30, 2012, the Company granted stock options to purchase a total of 3,000 shares at an exercise price of $0.33. The Company determined that the fair value of the common stock on the date of grant was $0.33 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2012 that indicated a valuation price of $0.33 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2012 to May 30, 2012.

On November 30, 2012, the Company granted stock options to purchase a total of 177,500 shares at an exercise price of $0.33. The Company determined that the fair value of the common stock on the date of grant was $0.33 per share. To assess the reasonableness of the fair value the Company on this date, the Company considered:

- the independent valuation report of March 31, 2012 that indicated a valuation price of $0.33 per share.
- there were no material changes in factors impacting the common stock per share value from March 31, 2012 to November 30, 2012.

Preferred Stock Warrant Liability

The Company accounts for its freestanding warrants to purchase the Company's Series A Preferred Stock as liabilities at fair value on the accompanying consolidated balance sheets. The warrants may only be settled in shares of Series A Preferred Stock. The warrants are subject to re-measurement at each balance sheet date, and the change in fair value, if any, is recognized as other income (expense). The Company will continue to adjust the liability for changes in fair value until the earlier of (i) exercise of the warrants, (ii) conversion of the

warrants into warrants to purchase common stock upon an event such as the completion of an initial public offering or (iii) expiration of the warrants. Upon conversion, the preferred stock warranty liability will be reclassified into additional paid-in capital. The Company used a Monte Carlo simulation in evaluating the fair value of the warrants, taking into consideration the down-round protection feature included within the warrant agreement.

Net Loss per Share
Basic net loss per share is computed by dividing net income by the weighted average number of common shares outstanding during each year. Fully diluted net loss per share is computed using the weighted average number of common shares and dilutive securities outstanding during each year. Dilutive securities having an anti-dilutive effect on diluted loss per share are excluded from the calculation.

Long-lived Assets
We perform reviews for impairment of long-lived assets whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. An impairment loss is recognized when estimated future cash flows expected to result from the use of the asset and their eventual dispositions are less than its carrying amount. When impairment is identified, the carrying amount of the asset is reduced to its estimated fair value. Assets to be disposed of are recorded at the lower of net book value or fair market value less cost to sell at the date management commits to a plan of disposal.

Material Weaknesses in our Internal Control.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

We have historically operated as a private company and the number and qualifications of our finance and accounting staff have not been consistent with those of a public company. We have identified material weaknesses in our internal controls with respect to our financial statement closing process of our consolidated financial statements for the years ended December 31, 2010 and 2011, for the nine months ended September 30, 2012. Our management discovered certain conditions that we deemed to be material weaknesses in our internal controls, as follows:

- A lack of accounting and finance resources as well as effective oversight by those in charge of governance resulted in insufficient controls over timely financial statement preparation and review as well as the preparation and review around accounting for certain complex transactions.

- The design of monitoring controls used to assess the design and operating effectiveness of our internal controls is inadequate. We also do not have an adequate internal process to report deficiencies in internal control to management on a timely basis.

We have begun to take actions that we believe will substantially remediate the material weaknesses identified. In response to the identification of our material weaknesses, we (i) intend to hire additional finance and accounting personnel, (ii) are in the process of establishing a review process for key aspects of our financial reporting process, including the accounting for complex transactions, and (iii) will seek to establish better operating controls and involve our board of directors in our internal controls process, which will involve establishing formal procedures to communicate deficiencies in internal controls on a timely basis, and encourage our board of directors to more actively participate in guiding management as it relates to internal controls matters. However, we cannot assure you that our internal control over financial reporting, as modified, will enable us to identify or avoid material weaknesses in the future. Regardless, following the completion of this offering we will be required to expend time and resources to further improve our internal controls over financial reporting, including by expanding our finance and accounting staff.

Results of Operations

Nine Months Ended September 30, 2012 and 2011 (unaudited)

Revenues

Total revenue for the nine months ended September 30, 2012, decreased approximately 98% to $3,110 as compared to $187,787 for the nine months ended September 30, 2011. For both periods our revenue was entirely comprised of grant awards. In October 2010, we were awarded a grant from the Internal Revenue Service of $244,479 for the reimbursement of qualified investments in a therapeutic discovery project under section 48 of the Internal Revenue Service Code. The grant proceeds were paid in two installments of which $162,435 was paid in 2011 and was included in revenue for the nine months ended September 30, 2011. We will continue our efforts to secure future grant funding to subsidize its ongoing research and developments costs.

Operating Expenses

Operating expenses are primarily comprised of research and development expenses and to a lesser extent general and administrative expenses. For the nine months ended September 30, 2012, research and development expenses represented approximately 37% of operating expenses, clinical trials and regulatory represented approximately 12% of operating expenses, and general and administrative expenses represented approximately 51% of operating expenses. For the nine months ended September 30, 2011, research and development expenses represented approximately 61% of operating expenses, clinical trials and research represented approximately 11% of operating expenses, and general and administrative expenses represented approximately 28% of operating expenses. For the nine months ended September 30, 2012, total operating expenses decreased 2.5% to $1,605,035 from $1,646,255 for the nine months ended September 30, 2011. Research and development expenses decreased approximately 41% to $591,395 for the nine months ended September 30, 2012 from $1,009,521 for the nine months ended September 30, 2011. This decline was due to approximately $162,000 for a large research project and approximately $146,000 for past patent expenses to the University of Miami which were incurred during 2011 but did not occur during 2012. For the nine months ended September 30, 2012, approximately $67,515 and $26,608 of the research and development expenses were attributable solely to research related to our lung cancer and ovarian cancer projects, respectively and the balance of such expenses were not attributable solely to any one project but were attributable to research relevant to all of our projects. Also, research and development manufacturing costs decreased by approximately $106,000 as manufacturing was being phased into the clinical and regulatory phase. Clinical trials and research expenses increased approximately 15% to $199,980 for the nine months ended September 30, 2012, from $174,654 for the nine months ended September 30, 2011, due to the hiring of a full time director to manage the clinical trials in 2012. General and administrative expenses increased approximately 76% to $813,660 for the nine months ended September 30, 2012, from $462,080 for the nine months ended September 30, 2011 primarily as a result of our decision to retain a full-time CEO in the second quarter of 2011 which resulted in additional expense of $119,000. Additionally, we incurred additional expenses of $60,000 for a contracted and full-time accounting staff. Finally, during the nine months ended September 30, 2012 we incurred additional travel expenses of $7,000 associated with the raising of capital, additional rent expense and administrative expenses of $29,000 due to the execution of a new lease, additional stock compensation expense of approximately $26,000, additional legal and financing costs of approximately $13,000, additional insurance costs of approximately $16,000, and additional audit fees of approximately $20,000. The additional unspecified increase in the general and administrative expense was attributable to our expansion.

Non-Operating Expenses

Non-Operating Expenses was primarily comprised of interest expense from our convertible notes which increased slightly to $77,369 for the nine months ended September 30, 2012 from $61,425 for the nine months ended September 30, 2011.

Net Loss

Our net loss after deducting the non-controlling interest increased 9% to $1,671,391 for the nine months ended September 30, 2012 from $1,533,674 for the nine months ended September 30, 2011.

Year Ended December 31, 2011 and 2010

Revenues

Total revenue for the year ended December 31, 2011, decreased approximately 50% to $187,787 as compared to $375,692 for the year ended December 31, 2010. For both years our revenue was entirely comprised of grant awards. In April 2010, we were awarded a grant award from the National Institute of Health in the amount of $300,000, of which $248,648 was paid to us in 2011 and $51,352 was paid to us in 2010. In October 2010, we were awarded a grant from the Internal Revenue Service of $244,479, of which $162,435 was paid in 2011 and $82,044 was paid in 2010.

Operating Expenses

Operating Expenses are primarily comprised of research and development expenses and to a lesser extent general and administrative expenses. For the year ended December 31, 2010, research and development expenses represented approximately 59% of our operating expenses and general and administrative expenses represented approximately 26% of our operating expenses. For the year ended December 31, 2011, research and development expenses represented approximately 56% of our operating expenses and general and administrative expenses represented approximately 32% of our operating expenses. For the year ended December 31, 2011, approximately $19,935 and $26,608 of the research and development expenses were incurred for research related solely to our lung cancer and ovarian cancer projects, respectively and the balance of such expenses were not attributable solely to any one project but were attributable to research relevant to all of our projects. For the year ended December 31, 2011 total operating expenses increased 132% to $2,222,587 from $959,280 for the year ended December 31, 2010. For the year ended December 31, 2011, research and development expenses increased approximately 121% to $1,246,587 from $562,855 for the year ended December 31, 2010, as a result of the increased funding of approximately $230,000 for four research projects, increased manufacturing costs of approximately $117,000 and the retention of additional consulting support of approximately $364,000. General and administrative expenses increased approximately 193% to $720,790 for the year ended December 31, 2011, from $246,063 for the year ended December 31, 2010, primarily as a result of increased payroll and benefit costs of approximately $261,000. Additionally, stock compensation expense increased by approximately $43,000, travel and entertainment costs associated with fundraising and business development increased by approximately $75,000, audit and accounting fees increased by approximately $50,000, rent expense associated with the execution of a new lease increased by approximately $20,000, and marketing and relocation costs increased by approximately $13,000.

Non-Operating Expenses

Non-Operating Expenses was primarily comprised of interest expense from our convertible notes which increased 49% to $63,173 for the year ended December 31, 2011 from $42,442 for the year ended December 31, 2010.

Net Loss

Our net loss after deducting the non-controlling interest increased 196% to $2,104,884 for the year ended December 31, 2011 from $711,438 for the year ended December 31, 2010.

Liquidity and Capital Resources

We have financed our operations since inception primarily through proceeds from equity financings and debt financings, primarily involving private sales of our Common Stock and other debt and equity securities, and to a lesser extent from the proceeds from grant awards and commitments from banks and vendors.

Our cash and cash equivalents totaled $131,324 as of September 30, 2012, an increase of $32,678 from December 31, 2011. During the nine months ended September 30, 2012, the primary sources of cash were issuances of stock and the draw downs on our bank financing facilities. The primary use of cash during the nine months ended September 30, 2012 was for working capital requirements.

Our cash totaled $98,646 at December 31, 2011, a decrease of $70,791 from December 31, 2010. During the year ended December 31, 2011, the primary sources of cash were net proceeds from the issuances of convertible notes of $1,447,709 which notes were later converted in exchange for Series A Preferred Stock. The primary use of cash during the year ended December 31, 2011 was for working capital requirements.

Since inception we have raised $2,623,709 from the issuance of convertible notes to investors, of which notes in the principal amount of $2,273,709 were issued to an investor, Brightline Ventures III, LLC the managing member of which is Mr. Smith, a member of our Board of Directors. As of December 31, 2010, we had notes outstanding to three investors in the aggregate principal amount of $1,176,000. The notes accrued interest at a rate of 3% per annum and were scheduled to mature 18 months after issuance. In 2011, we raised an additional $1,447,709 from the issuance of notes to three investors, one of which was Brightline Ventures III, LLC. The notes accrued interest at a rate of 3% per annum and were scheduled to mature 18 months after issuance. All of the notes were converted into shares of Series A Preferred Stock in September 2011.

Our continued operations will primarily depend on our ability to raise additional capital from various sources including equity and debt financings, as well as grants and bank financings. On October 20, 2011, we entered into an agreement with a vendor that allows us to make up to $950,000 of payments for services rendered by such vendor through the issuance of a convertible note. The note will accrue interest at a rate of 12% per annum and is automatically convertible into the equity issued in our next financing upon a financing of $7,500,000. The agreement allows the vendor to treat unpaid invoices as advances of principal. As of December 31, 2012, there was $197,099 outstanding under this loan. The amounts due to the vendor under the loan which are not converted are due on demand at any time after October 20, 2020. On December 14, 2011, we entered into a promissory note with the North Carolina Biotechnology Center pursuant to which we could borrow up to $250,000. The note accrued interest at a rate of 4.25% per annum. The principal was payable in annual installments in the amount of five percent (5%) of the outstanding principal as of the date of such payment, commencing on the anniversary date of the related loan agreement and continuing annually on the same day of each calendar period thereafter until December 13, 2014. In August 2012 we repaid all amounts outstanding under the note from the proceeds of the Square 1 Bank loan described below. In connection with the loan from North Carolina Biotechnology Center, we issued the North Carolina Biotechnology Center a warrant exercisable for 29,762 shares of our Common Stock at an exercise price of $2.10 per share, which warrant expires on December 13, 2021. In August 2012, we entered into a secured loan with Square 1 Bank, the proceeds of which were used in part to pay off the loan from North Carolina Biotechnology Center. The loan and security agreement that we entered with Square 1 Bank in connection with the secured loan (the "Square 1 Agreement") provides that Square 1 Bank will provide us with a term loan in the aggregate principal amount not to exceed $1,000,000 to be used for working capital and capital expenditures (the "Tranche A Loan"). The Tranche A Loan will be available to us until August 7, 2013. The Tranche A Loan is payable as interest-only until August 7, 2013 and then is payable in 36 monthly installments of principal and accrued interest. The Tranche A Loan matures on August 7, 2016. If we receive a grant that provides aggregate funds with a value of $16,000,000, the maximum Tranche A Loan amount increases to $2,775,000. If we receive $5,000,000 or more from the sale of our equity to investors, the Square 1 Agreement also provides that twelve months after we receive such funds we can borrow an additional term loan in the aggregate principal amount not to exceed $1,000,000 to be used for working capital and capital expenditures (the "Tranche B Loan"). The Tranche B Loan matures on August 6, 2016. The Bank also made one term loan in the amount of $225,000, which was used to repay our debt to North Carolina Biotechnology Center (the "Term B Loan").The Term B Loan matures December 14, 2014 and requires payments on the one and two year anniversary of the date of issuance equal to five percent of the principal amount of the loan plus accrued interest, with the balance of the loan being paid on maturity. Once repaid the loans may not be re-borrowed. The loans are secured by a lien on substantially all of our assets, including our stock in our subsidiaries but excluding our intellectual property. As of December 31, 2012, we had borrowed $725,000 under the Square 1 Bank loan. In connection with the loan, we issued Square 1 Bank a warrant exercisable for 17,500 shares of our Series A Preferred Stock. The warrant is exercisable for ten years at a price of $2.10 which price is subject to adjustment for certain transactions including certain dilutive transactions. The warrant holder is entitled to piggyback registration rights with respect to the underlying shares.

The loan and security agreement with Square 1 Bank sets forth various affirmative and negative covenants that the Company must comply with, including covenants regarding financial reporting, limits on the Company's "cash burn", incurrence of indebtedness and mergers and acquisitions. Under the loan agreement, as amended, we are required to raise an additional $5,000,000 on or prior to December 15, 2012 and until such time, we will be in default under the loan and the bank will no longer allow us to borrow additional amounts under the loan. In addition, our failure to comply with this financial covenant or any of the other financial covenants could result in the bank's foreclosure of our assets securing the loan. We intend to use a portion of the proceeds of this offering to repay the outstanding loan from Square 1 Bank. We are currently in discussion with Square 1 Bank to extend the December 15, 2012 date; however there can be no assurance that the outcome of such discussions will be favorable. We expect to be able to borrow additional amounts under the loan upon the consummation of this Offering.

In April 2010, we were awarded a grant award from the National Institute of Health in the amount of $300,000, of which $248,648 was paid to us in 2011 and $51,352 was paid to us in 2010. In October 2010, we were awarded a grant from the Internal Revenue Service of $244,479, of which $162,435 was paid in 2011 and $82,044 was paid in 2010.

Current and Future Financing Needs

We have incurred an accumulated deficit of approximately $5,186,473 as of September 30, 2012. We have incurred negative cash flows from operations since we started our business. We have spent, and expect to continue to spend, substantial amounts in connection with implementing our business strategy, including our planned product development efforts, our clinical trials, and our research and discovery efforts.

The actual amount of funds we will need to complete our 300 patient Phase II trial on patients advanced non-small cell lung cancer and a 93 patient, Phase I/II trial of HS-410, which is estimated to be $13,500,000, is subject to many factors, some of which are beyond our control. These factors include the following:

- the progress and cost of our research and development activities;
- the number and scope of our research and development programs;
- the progress and cost of our preclinical and clinical development activities;
- our ability to maintain current research and development licensing arrangements and to establish new research and development and licensing arrangements;
- our ability to achieve our milestones under licensing arrangements;
- the costs involved in prosecuting and enforcing patent claims and other intellectual property rights; and
- the costs and timing of regulatory approvals.

We have based our estimate on assumptions that may prove to be wrong. We continue to require additional funds to fully implement our planned research and development and may need to obtain these funds sooner or in greater amounts than we currently anticipate. Potential sources of financing include corporate partnerships or public or private sales of our shares or debt and other sources. We may seek to access the public or private equity markets when conditions are favorable due to our long-term capital requirements. We do not have any committed sources of financing at this time other than as described previously and there can be no assurance given that any additional funding will be available when we need it on terms that will be acceptable to us, or at all. If we raise funds by selling additional shares of Common Stock or other securities convertible into Common Stock, the ownership interest of our existing stockholders will be diluted. If we are not able to obtain financing when needed, we may be unable to carry out our business plan. As a result, we may have to significantly limit our operations and our business, financial condition and results of operations would be materially harmed.

License and Contractual Agreement Obligations

Below is a table of our contractual obligations for the years 2012 through 2016 and thereafter*(in thousands)*:

	Year ended December 31,						
	2012	2013	2014	2015	2016	Thereafter	Total
Total License Agreements(1)	$ 30	$ 50	$ 50	$ 60	$ 60	$ 760	$ 1,010
Lease Agreements(2)	43	4	—	—	—	—	47
Total	$ 73	$ 54	$ 50	$ 60	$ 60	$ 760	$ 1,057

(1) Represents minimum royalty payment commitments under our license agreements.
(2) In November 2011, we entered into a thirteen month lease agreement for office space commencing February 1, 2012 for a monthly rent of $3,870. The lease term may be extended for an additional 24 months on substantially the same terms. On December 19, 2012, we entered into a lease modification agreement which extended the lease term until July 31, 2013 and the monthly rent increased to $4,046. Future minimum lease payments are as set forth above.

Below is a table of our contractual payments under the Company's notes payable agreements for the years 2012 through 2016 and thereafter*(in thousands)*:

	Year ended December 31,					
	2012	2013	2014	2015	2016	Total
Notes Payable	$ 230	$ 65	$ 292	$ 71	$ 34	$ 692
Total	$ 230	$ 65	$ 292	$ 71	$ 34	$ 692

BUSINESS

Overview

We are a clinical-stage biopharmaceutical company engaged in the development of novel allogeneic, "off-the-shelf" cellular therapeutic vaccines to combat a wide range of cancers and infectious diseases. Our proprietary *ImPACT* "gp96-Ig" cancer therapy delivers live, genetically-modified, irradiated human cells which are "reprogrammed" to "pump out" a broad spectrum of cancer associated antigens together with a potent immune adjuvant called "gp96" to educate and activate a cancer patient's immune system to recognize and kill cancerous cells. The secreted antigen-adjuvant complexes generate potent anti-cancer immune responses in patients by mobilizing and activating killer T cells that target multiple cancer antigens, thus harnessing a patient's own immune system to fight cancer. In a phase I clinical trial in non-small cell lung cancer patients (NSCLC), our "off-the-shelf" therapeutic vaccine candidate HS-110 generated potent anti-cancer immune responses in patients (including the mobilization and activation of killer T cells against multiple cancer antigens), was well tolerated and demonstrated preliminary indications of clinical efficacy.

As an "off-the-shelf" therapeutic vaccine, *ImPACT* uses a common master cell line to mass-produce a single vaccine product applicable to all patients for each particular cancer type, thus providing a traditional biopharmaceutical approach to deliver pan-antigen immunotherapy with logistical, manufacturing and cost of goods benefits compared to autologous patient-specific approaches.

We are in the process of initiating a Phase II clinical trial in non-small cell lung cancer (NSCLC) with our therapeutic vaccine candidate HS-110, which is derived from a genetically-modified human lung cancer cell line. The results of our recently completed 18 patient Phase I clinical trial in lung cancer patients, in which the 15 patients who remained at the end of the trial were evaluated, demonstrated that HS-110 was well tolerated with minimal to no indications of treatment-related toxicity with positive correlations between levels of observed immune responses and therapeutic efficacy. Specifically, the trial demonstrated a response rate of 73%[3] and a median survival of 16.5 months for immune responders, versus a median survival of 4.5 months for immune non-responders. These findings were consistent with those of our multiple pre-clinical published studies.

We have also developed *ImPACT* therapeutic vaccines for bladder cancer, breast cancer and ovarian cancer. We plan to initiate a Phase I clinical trial for bladder cancer in mid 2013 with HS-410, a genetically-modified bladder cancer cell line. To date, in excess of $13,000,000 of funding has been awarded to the primary inventor of the technology we license by the National Institutes of Health (NIH) and through other research and clinical grants in order to fund development of our technology and these clinical programs. We have little control over the direction of the NIH grant funds that have been received by the primary inventor of the technology we license and since payment is made to the inventors as opposed to us we do not recognize any revenue from such grant funds nor do they fund any expenses that we incur. Although earmarked for further development of the technology that we license, any funds awarded to the primary inventor are used in his discretion and we have little control over his use of the funds.

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3 Responders are defined as those patients exhibiting a twofold or greater increase in their CD8 cells after 6 weeks of therapy.

The table below summarizes our current product candidates and their stages of development:

Product Candidate	Indication	Phase of Development	Upcoming Milestone(s)
HS-110	Non-Small Cell Lung Cancer (NSCLC)	Completed Phase I	2013 - Initiate Phase II – Q1, 2013
HS-410	Bladder Cancer Adjuvant	Completing cGMP Manufacturing	2013 - Initiate Phase I/II
HS-310	Ovarian Cancer	Initiating cGMP Manufacturing	2014 - Phase I/II trials
HS-510	Triple Negative Breast Cancer (TNBC)	Cell line development underway	2014 - Phase I/II trials
HS-HIV	HIV	Primate Studies Underway	Complete primate studies, Q2, 2013

We plan to begin clinical trials against breast and ovarian cancer in 2014, pending receipt of additional grants or financing. The NIH is also currently fully funding an advanced study of our HS-HIV product candidate in non-human primates with a therapeutic and prophylactic vaccine for the treatment and prevention of HIV utilizing our *ImPACT* approach.

***ImPACT* Therapy—Novel Pan-Antigen Immune Activation**

Our *ImPACT* therapy is a novel technology platform designed to educate and stimulate the immune system to combat specific disease targets, such as cancer cells. *ImPACT* utilizes live attenuated, human-derived, genetically-modified cells that generate an array of cellular antigens and secrete an essential immunostimulatory protein called "gp96-Ig". The secreted proteins are designed to generate a potent immune response to cancer cells by mobilizing and activating a patient's own killer T cells to recognize and attack a broad array of different tumor antigens with the goal of eliminating cancer cells. In contrast with other vaccine technologies that target only one antigen, *ImPACT's* pan-antigen approach enables the body to induce and maintain an immune response against a broad array of tumor-specific proteins, providing a much more robust immune response and limiting cancer cells' ability to evade the immune system. Clinical and pre-clinical results suggest that *ImPACT* generates potent anti-tumor immune responses capable of not only targeting and destroying tumors, but also maintaining cancer remission, even when re-challenged with new cancer cells. Our novel, off-the-shelf, live cell therapy can be used to not only combat a wide range of cancers, but also against various infectious diseases, such as hepatitis C, malaria and HIV, for which non-human primate studies are currently ongoing.

We have leveraged our existing infrastructure by developing additional clinical candidates in areas where we can use our proprietary technology. Our success will depend on the clinical and regulatory success of our product candidates and our ability to retain, on commercially reasonable terms, financial and managerial resources, which are currently limited. To date, we have not received regulatory approval for any of our product candidates or derived any revenues from their sales. Moreover, there can be no assurance that we will ever receive regulatory approval for any of our product candidates or derive any revenues from their sales. We should have sufficient capital from the Offering to operate the company for 18-24 months.

Our ImPACT Therapy Product Candidates

We plan to initiate our Phase II clinical trial with HS-110, our lead drug candidate, against non-small cell lung cancer (NSCLC) upon completion of this Offering. The previous Phase I clinical trial of HS-110 in 18 lung cancer patients showed that HS-110 is well tolerated and safe, that it activates an immune response in a significant portion of the patients to whom it is administered, and that immune responders may demonstrate a significant increase in the overall survival compared to non-immune responders. Our Phase II trial will expand upon the Phase I results as described below.

We also plan to initiate a Phase I/II clinical trial against bladder cancer in mid 2013 using our HS-410 drug candidate, which is currently being manufactured in accord with cGMP production guidelines. We plan to utilize this drug as an immunotherapy to prevent the recurrence of bladder cancer in post-resected bladder cancer patients.

We are also anticipating initiating clinical trials using our *ImPACT*-based product candidates against a number of other diseases, including ovarian cancer and breast cancer.

Our Product Candidates and Clinical Development Programs

Our development program involves testing our *ImPACT*-based product candidates against a number of disease targets, including non-small cell lung cancer, breast cancer, ovarian cancer, bladder cancer and HIV. We are currently entering a Phase II clinical trial with our first therapeutic vaccine, HS-110, for non-small cell lung cancer (NSCLC). We are also planning to initiate a Phase I clinical trial of HS-410 for bladder cancer in mid-2013. In addition, we may also initiate Phase I clinical trials for breast and/or ovarian cancer in 2014, dependent upon the receipt of additional non-dilutive grants and/or product financings. We have an ongoing advanced study in non-human primates with a therapeutic and prophylactic vaccine for the treatment and prevention of HIV. This ongoing study is fully funded by the NIH.

Investment Highlights

- Our *ImPACT* technology is a novel way to activate the immune system against a variety of antigens in order to treat a wide range of cancers and infectious diseases.
- We are entering a Phase II clinical trial for our lead product, HS-110, for non-small cell lung cancer based upon encouraging safety and efficacy data generated in our Phase I trial.
- We expect to enter a Phase I trial for our second product, HS-410, for bladder cancer in mid- 2013.
- The mechanism of action for gp96-Ig is understood. Tumors typically contain many potential antigens. A majority of immunotherapy vaccines in clinical trials target specific antigens and will thus miss other antigens that are present. gp96-Ig is unique because it binds to all viral proteins and has the ability to generate killer T cell responses for any tumor protein present.
- We have a capital efficient business model. Heat does not own any research or manufacturing facilities and relies on universities to provide such facilities. Heat has been able to leverage various academic research and manufacturing facilities in order to save capital expenditures that might otherwise have been spent on infrastructure. The result is that Heat has a low ongoing burn rate. Heat will continue to utilize this business model with its therapeutic vaccines for other forms of cancer and infectious diseases.
- Our numerous products offer investors "multiple shots on goal." Heat's proprietary technology platform, *ImPACT*, is being applied to develop multiple therapeutic vaccines against a wide range of cancers and infectious diseases. We have many opportunities to generate positive results and to gain FDA approval, which lowers our dependence on any one drug in order to generate returns. Thus, this investment does not turn on a single binary event.
- We have also developed vaccines against HIV/AIDS. The NIH is currently funding the second phase of a pre-clinical study in nonhuman primates for HIV/AIDS. In the first phase of the study, Heat's vaccine showed the greatest cytotoxic T cell response ever recorded against HIV/SIV in primates. The study is still in process to see whether Heat's *ImPACT* technology may reduce, prevent or eliminate infection of the HIV/AIDS virus.
- There have been no serious adverse events (SAE's) associated with Heat's technology to date. In addition to HS-110's lower cost and greater efficacy in treating tumors, a major reason for physicians to choose the *ImPACT* platform is that it has no known SAE's. In contrast to chemotherapy, immunotherapy works in conjunction with the body's immune system to reduce tumors. As a result, Heat's therapy may be more easily tolerated by patients than other therapies.
- Our *ImPACT* technology enables the company to rapidly and efficiently generate and test new drugs against a variety of different diseases
- Our vaccines are easier to manufacture than other competitive cancer vaccines, most of which are patient specific.Patient-specific, or autologous, approaches use tissue taken directly from the cancer patient to formulate vaccines. This is very expensive due to the manufacturing and logistical issues required to create a unique therapy for each patient. In contrast, Heat creates allogeneic (off-the-shelf) vaccines from a single donor cell line; this approach enables us to provide more efficient and cost effective patient therapy.

- Our therapy does not require an adjuvant. Most vaccines require the addition of another drug, called an adjuvant, to enhance their effectiveness. Adjuvants typically cause irritation at the injection site. As HS-110 is itself an adjuvant, Heat does not have to use additional adjuvants to generate and maintain an activated immune response.

Strategy

Our objective is to become a leading biopharmaceutical company specializing in the development and commercialization of allogeneic, off-the-shelf therapeutic vaccines. We are focused on discovering, developing and applying our core platform *ImPACT* technology towards a number of disease indications. The key elements of our strategy are:

- *Develop and obtain regulatory approval for our ImPACT-based products*. We are initiating a Phase II clinical trial against NSCLC and intend to conduct a Phase I /II clinical trial against bladder cancer in mid 2013. Additionally, we plan to initiate clinical trials against breast and ovarian cancer in 2014, pursuant to receiving additional non-dilutive grants and/or product financings. After NSCLC, bladder, breast and ovarian cancers, we plan to initiate additional clinical trials against other disease targets utilizing our *ImPACT* technology platform ..

- *Maximize commercial opportunity for our ImPACT technology*. Our product candidates target large markets with significant unmet medical need .. For each of our product candidates, we seek to retain all manufacturing, marketing and distribution rights which should give us the ability to maximize the economic potential of any future U.S. or international corporate partnerships. We believe that we should be well positioned to successfully commercialize our product candidates independently or through U.S. and international corporate partnerships.

- *Further expand our broad patent portfolio.* We have made a significant investment in the development of our patent portfolio to protect our technologies and programs, and we will continue to do so. We have obtained exclusive rights to five different patent families directed to therapeutic compositions and methods related to our vaccine platform and preclinical development programs for cancer. These families comprise five PCT applications, six issued patents, one allowed or accepted patent application, and thirty-eight pending patent applications. These patents and applications cover the United States, Europe, and Japan as well as several other countries having commercially significant markets.

- *Manage our business with efficiency and discipline.* We believe we have efficiently utilized our capital and human resources to develop and acquire our product candidates and programs, and create a broad intellectual property portfolio. We operate cross-functionally and are led by an experienced management team with backgrounds in developing and commercializing product candidates. We use rigorous project management techniques to assist us in making disciplined strategic program decisions and to attempt to limit the risk profile of our product pipeline.

- *Obtain additional grant funding.* We plan to continue to seek and access external sources of grant funding on our own behalf and in conjunction with our academic partners to support the development of our pipeline programs. While we will work with our academic partners to secure additional grant funding, these partners have no obligation to work with us to secure such funding. We will also continue to evaluate opportunities and, as appropriate, acquire or license technologies that meet our business objectives.

Disease Targets and Markets

The Oncology Market

The American Cancer Society estimates that 1.69 million people in the U.S. will be diagnosed with cancer in 2012.[4] The lifetime probability of being diagnosed with an invasive cancer is 45% for men and 38% for women. It is projected that 577,190 Americans will die from cancer in 2012.

Despite continuous advances made in the field of cancer research every year, there remains a significant unmet medical need as the overall five-year survival rate for a cancer patients diagnosed between 2001 and 2007 is an average of 67%[5]. According to the Center of Disease Control, in 2011, cancer was the second leading cause of mortality in the U.S. (23.2%) behind heart disease (24.1%).[6] The American Cancer Society estimates that one in four deaths in the U.S. is due to cancer.

The main treatments for cancer are surgery, radiotherapy and chemotherapy. There are often, however, significant debilitating effects resulting from these treatments or lingering morbidity associated with these approaches to treatment of cancer. Our goal is to develop compounds that can lengthen survival times and improve the quality of life of cancer patients and survivors.

Al though there are a large number of patients, treatment and management of cancer is performed by a relatively concentrated pool of medical professionals. We plan to reach this prescriber base using a relatively small commercial infrastructure that we intend to develop in the future by either hiring internally, partnering or contracting with one or more third-party entities with an established sales force. These development plans are dependent on our raising additional capital, the success of HS-110, HS-310, HS-410 and HS-510 and any technologies we might develop in the future and successful negotiation of commercial relationships, none of which we have completed to date. We believe, however, assuming the efficacy and safety of HS-110 and any other technology we might acquire, that our experienced management team will raise the capital and establish the commercial relationships necessary for success.

Limitations of Current Cancer Therapies

We believe current cancer treatment alternatives suffer from a number of limitations that impair their effectiveness in improving patient survival and overall quality of life including:

- *Toxicity.* Chemotherapeutic agents are highly toxic to the human body and very often causea variety of significant and debilitating side effects, including, but not limited to, nausea and vomiting, bleeding, anemia and mucositis. Some targeted therapeutics have fewer systemic toxicities, but still typically have off-target effects such as gastrointestinal inflammation, severe skin reactions and breathing difficulties. These side effects limit a patient's ability to tolerate treatment and as such can deprive the patient of the potential benefit of additional treatments or treatment combinations that might otherwise destroy or prevent the growth of cancer cells. Once they become aware of the limited efficacy, limited increased survival and potentially significant toxicity of existing treatment alternatives, many patients diagnosed with terminal cancer often choose to limit or forego therapy in order to avoid further compromising their quality of life. Patients with advanced stage cancer also often cannot tolerate cancer therapy, and certain therapies can hasten death as the patient's health further deteriorates from the therapy applied.

- *Mechanism of action.* While many current therapeutic approaches can be effective against specific targeted cells, the efficacy of these therapies on treating cancer over the long term generally is limited by the abundance and diversity of the cancer and tumor cells, which is believed to enable the targeted cells to adapt and become resistant to the current therapeutic approach over time.

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4 Siegel, R., D. Naishadham, and A. Jemal. (2012) Cancer Statistics, 2012. *CA: A Cancer Journal for Clinicians.* 62(1):10-29.

5 Ibid

6 http://www.cdc.gov/nchs/fastats/lcod.htm.

- *Short-term approach.* Other than tumor removal in a surgical procedure, curing the cancer is often not the intent or a potential outcome of many current cancer therapies. Rather, survival benefit is the primary focus of many currently marketed and development-stage cancer therapeutics. In this regard, many cancer therapies show only a modest impact on the overall survival of the patients and only affect the length of time that passes after treatment begins and before the patient's disease worsens or the patient dies.

- *Immune system suppression.* A weakened immune system not only further inhibits the body's natural ability to fight cancer, but also causes patients to become more susceptible to infections and other diseases. Current approaches to cancer treatment generally involve introduction of an agent, such as a chemical, an antibody or radiation, which causes cell apoptosis (programmed cell death) or inhibit the proliferation of all cells, including immune cells, which has the unintended consequence of indirectly suppressing the immune system.

Immunotherapy Overview

Our *ImPACT* technology is a form of immunotherapy. Immunotherapy involves administration of a therapeutic approach that enlists or boosts a subject's immune system in order to fight disease.

Commonly recognized successful examples of immunotherapy include*prophylactic vaccines*, such as, childhood immunizations against infectious diseases such as measles, mumps, and rubella. In these cases, usually weakened (attenuated) or inactivated viruses are injected into the body to educate certain immune system cells to recognize and remember small pieces of viral or bacterial proteins (antigens). If and when an individual is subsequently exposed to this same pathogen, the immune system will recognize these antigens immediately and mount a potent immune response to neutralize and eliminate the pathogenic threat.

Therapeutic vaccines, such as *ImPACT*-based product candidates, operate in a fashion similar to*prophylactic vaccines* except that *therapeutic vaccines* are administered after the onset of a particular disease. In each case, the human immune system is educated and harnessed to recognize and fight the disease of interest. Cancer can be considered a failure of the immune system to effectively recognize and eliminate inappropriately dividing and multiplying (malignant) cells. Under ordinary circumstances the human immune system continuously monitors and eliminates inappropriately dividing cells. However, for reasons that are not entirely understood, under cancerous conditions the human system fails to recognize malignant cells and such cells evade the immune system and are permitted to inappropriately multiply, grow and metastasize to form tumors which eventually become life threatening. Our therapeutic vaccines are designed to assist the immune system in identifying and eliminating malignant cells. Our approach involves the introduction of cellular antigens that are characteristic of malignant cells with the goal of generating an immune response against the particular form of cancer. In our approach, in addition to introducing a number of cancer-specific antigens, we also introduce a protein known as gp96 which stimulates and primes the immune system in further recognizing cancer antigens and generates a potent and broad pan-antigen immune response against cancerous cells.

Immunotherapy Approaches

Immunotherapy is designed to stimulate and enhance the body's natural mechanism for killing cancer cells and virus-infected cells. Generally, immunotherapeutic approaches to treat disease can be separated into two distinct classes, passive and active, based on their mechanism of action.

Passive Immunotherapy: Passive immunotherapies generally consist of monoclonal antibodies directed at a single disease-specific enzyme or protein on the surface of the targeted cells with the goal of either killing the targeted cells or preventing them from dividing. Rather than stimulate or otherwise use the body's immune system to initiate the attack on the disease, the attack is made by the therapy which is produced *ex vivo*, or outside of the body. These therapies also are not usually personalized for the patient.

Active Immunotherapy: Active immunotherapies generally consist of therapies intended to trigger or stimulate the body's own immune system to fight disease. It is a more specific approach to immunotherapy than passive immunotherapy because active immunotherapies have no direct therapeutic action but rather contain antigens specifically designed to activate the patient's own immune system to find and kill the targeted cells that carry the

same antigen. Active immunotherapies depend on the patient's immune system to seek out and destroy targeted cells or tumors. Most active immunotherapies utilize off-the-shelf antigens, known as "defined" antigens, rather than individualized, patient specific antigens, and are often paired with adjuvants, which are agents that generally activate the immune system cells to increase immune response.

Shortcomings of Immunotherapies: Both passive and active immunotherapy approaches have shortcomings, which include:

- Most active immunotherapies use normal, non-mutated, self-antigens which are typically poor at stimulating immune responses, even from healthy immune systems. In fact, the human immune system generally does not generate immune responses against self-antigens. Most passive and active immunotherapies also target one or only a few antigens, which increases the probability that infected cells will escape detection by the immune system and immunotherapy.

- Most active immunotherapies employ defined antigens that are not effective against multiple types of cancer. As such, further preclinical development is necessary to help identify the relevant antigens that address the targeted cancer(s).

- Most immunotherapies can suffer from toxicity side effects resulting in damage to healthy tissues if the target antigen is absorbed by normal cells in addition to the targeted cancer or virus-infected cells.

- Many patients may not be able to mount effective immune responses with immunotherapy due to tumor or virus induced immunosuppression of accessory cells such as CD4+ helper T-cells, which are necessary for the immunotherapies to be effective but may be functionally impaired by the patient's disease.

- It can be difficult to commercialize immunotherapies based on cells derived from individual patients in a cost-effective manner as a result of the need to use manual processes to produce from a limited amount of patient material multiple doses and to store and ship the individual doses.

- Immunotherapies that rely on defined, off-the-shelf antigens or a single targeted antigen may have limited effectiveness because even within the same type of cancer, the genetic makeup and distinct antigens of a tumor can vary significantly from patient to patient.

These shortcomings were highlighted by the findings of a study recently published in *Nature Medicine* where the whole genomes of 50 patients' breast cancer tumors were sequenced alongside matching DNA from the same patients' healthy cells to identify the genetic alterations present in the cancerous cells. The study found that the genomic pattern of each of the tumors varied significantly. Of the approximately 1,700 gene mutations found in total, most were specific and unique to the individual patients' cancerous tumors, and that only three of the genetic mutations occurred in 10% or more of the patients.

Although many of the immunotherapies currently in clinical development have shown promising results, we do not believe that any of them utilizes a technology that employs the patient's own cancer or virus-infected cells to create a fully personalized immunotherapy that is directly targeted to the patient's unique genetic disease.

Our Solution: ImPACT Therapy

We believe our *ImPACT* Therapy has a number of advantages over existing therapies. These advantages, elaborated below, may enable us to develop commercial products that extend the survival of, and improve the quality of life for, cancer patients:

- It is designed to fight cancer by activating the immune system against a wide variety of cancer antigens.

- It is intended to continually secrete a wide variety of cancer-associated antigens, thus issuing a broad and sustained pan-antigen cytotoxic T-cell attack against the targeted cancer. We believe this broad-based attack increases the probability of destroying the targeted cancer.

- It is designed to stimulate a natural immune response against specific cancer cells. We have not observed serious adverse events in our clinical trials or in our numerous published animal studies.

- We believe that the novel mechanism of action, good tolerability and favorable safety profile will enable our *ImPACT* product candidates to have potential benefits across multiple disease stages and tumor types and in combination with other therapies. Our *ImPACT* technology can be targeted to additional specific tumor types by modifying cells from the cancer type of interest.

- Our *ImPACT* Therapy represents a first-in-class adjuvant that functions as both an immune activator and an antigen-delivery vehicle. *ImPACT* is the only adjuvant technology platform currently known to us in clinical development that is specific to CD8+ cytotoxic T cell immune response, which is especially important for developing therapeutics in oncology as well as a number of other infectious disease indications.

- We believe many patients who are too ill to tolerate chemotherapy due to the associated toxicities may be able to benefit from our *ImPACT* product candidates.

ImPACT TECHNOLOGY PLATFORM

ImPACT Background

Our *ImPACT* technology represents an off-the-shelf method to deliver cancer antigens accompanied by heat shock proteins ("HSPs") to illicit a potent immune response. Heat shock proteins are used as a signaling mechanism by the immune system to identify mutated proteins ("antigens"), including those from tumor cells.[7] Although always present within certain cells, HSPs are normally only released whenever cells die by necrosis or unnatural cell death (rather than apoptosis or natural programmed cell death) and upon release are recognized by the host's immune system. Upon detection of HSPs, the immune system can then direct an immune response against any foreign (pathogenic) proteins bound to the heat shock protein at the time the cell that released it died by necrosis.

When a cell dies an unnatural death, such as when it is infected and killed by a flu virus or other pathogen, it breaks open and emits its contents including HSPs into the surrounding tissue. This process is called necrosis. Because heat shock proteins very rarely leave cells, the immune system has evolved to recognize heat shock proteins that have been released from dying cells as the sentries of a molecular alarm system.

HSP's have several functions including:

- Protecting tissues from pathogens by activating the immune system.

- Acting as a chaperone to:
  - Facilitate proper protein folding within the endoplasmic reticulum.
  - Enable proper function of toll-like receptors and the innate immune system.
  - Carry irreparable proteins to intracellular garbage disposals to be degraded into peptides (short chains of amino acids– protein fragments).

- Loading peptides onto another class of proteins known as MHC I molecules. MHC I molecules move to the cellular surface where they are monitored by the immune system.

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7 Annu Rev Immunol. 2002; 20:395-425. Epub 2001 Oct 4.

Heat shock protein gp96 is one of the most abundantly expressed proteins in the human body and is expressed by all cells.[8] It is normally retained within cells in a compartment called the endoplasmic reticulum (ER), where it facilitates the folding of newly synthesized proteins so that they may perform their various tasks properly. Gp96 is particularly important in the process of detecting antigens as it is present in all cell types, it is able to recognize all antigens. It also induces the immune system to activate CD8+ ("killer") T cells which then seek out and destroy the cells that are marked by antigens. Gp96 is normally only contained inside the endoplasmic reticulum of cells, however when a cell dies an abnormal death through necrosis it breaks open and releases gp96 into the surrounding tissue microenvironment. ImPACT works by modifying the chemical structure of gp96 so that a cell can continuously release it into the extracellular space accompanied by the unique peptide that it is folding at the time without causing necrosis. This allows the immune system to seek out and destroy cells characterized with antigens before the body would otherwise have detected them.

***ImPACT* Technology Overview**

The problem with utilizing gp96 as a cancer immunotherapy is that it is normally retained within cells by a small region called a "KDEL sequence" that acts like a "leash", preventing gp96 from leaving the endoplasmic reticulum. Therefore, in order to utilize gp96 as a therapeutic gp96 would either have to be purified from individual cells or engineered to be secreted from cells.

To overcome this problem, a team of scientists led by Eckhard, Podack, MD, Ph.D., the Chairman of our Scientific Advisory Board and the inventor of our technology, deleted this KDEL sequence and replaced it with another sequence that causes the new fusion protein, called gp96-Ig, to be released from cells continuously[9]. Multiple tumor cell lines were then made to express gp96-Ig, and as expected, secreted it continuously into the extracellular space in a complex with tumor proteins. Dr. Podack demonstrated that gp96-Ig vaccination effectively cross-presented tumor specific antigens to immune cells, led to expansion of Cytotoxic T Lymphocytes (CTL) and the subsequent rejection of injected tumor cells.[10] Importantly, these studies demonstrated that the secreted protein gp96-Ig maintained the critical characteristics of the native gp96 protein required to generate anti-tumor immune responses.[11] **Thus, proof-of-principle was established that the innovation, gp96-Ig, not only retained the desired properties of the native gp96 protein, but significantly enhanced those functions and led to powerful tumor-killing immune responses.**

Our ImPACT technology platform:

- ***Effectively cross-presents tumor antigens and leads to cytotoxic killer T cell activation***

  Published studies in mice showed that killer T cell activation was approximately 10 million times greater with *ImPACT* secreted gp96-Ig than with a corresponding gp96 protein injection.[12] The modified cell secretes gp96 in a sustained release for several days after injection. This creates a sustained immune response. Additionally, the immune response kills tumor cells, releasing additional gp96 and creating a continuous response loop that supports persistent activation of killer T cells. This data suggests that gp96-chaperoned peptides may represent the most efficient, robust pathway for presenting a cell's antigens to the immune system and activating killer T cells.

- ***Binds and presents all potential tumor antigens to the immune system simultaneously***

  A single type of tumor (or virus) might have multiple strains derived from numerous tumor cells. These different strains have different antigens, all of which are capable of initiating an immune response. By creating a vaccine from a native tumor-cell line, we believe that *ImPACT's* technology can develop a therapy that shares many common features with patients' tumors of the same origin. We believe this "blanket" approach will provide each patient with a higher likelihood of a positive response to the therapy.

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8 Srivastava PK, Menoret A, Basu S, Binder RJ, McQuade KL. Heat shock proteins come of age: primitive functions acquire new roles in an adaptive world. Immunity. 1998; 8:657–665.

9 Yamazaki, K., Nguyen, T., and Podack, E.R. (1999). Cutting Edge: Tumor Secreted Heat Shock-Fusion Protein Elicits CD8 Celles for Rejection. J Immuno 1999; 163:5178-5182.

10 Ibid.

11 Oizumi, S., Strbo, N., Pahwa, S., Deyev, V., and Podack, E.R. (2007). Molecular and cellular requirements for enhanced antigen cross-presentation to CD8 cytotoxic T lymphocytes. J Immunol *179*, 2310-2317.

12 Ibid.

- ***Features killer T cell Activation that is independent of CD4+ T cell help***

  Animal studies have confirmed that our technology initiates a mechanism called cross-presentation that is critical to inducing tumor rejection. Importantly, it does this independently and successfully without additional CD4+ T cell recruitment, which is typically required in a normal immune system response. This is particularly important in cancer and HIV because helper T cell activity is frequently impaired in these disease states.

- ***Causes few side effects***

  Our technology allows the body to recognize cancer as a foreign entity and uses the body's natural immune mechanism to fight it. In doing so, we believe Heat's therapy will generate fewer side effects and that patients will be able to maintain a higher quality of life.

The distinguishing characteristics of *ImPACT* are:

(i) Heat's patented approach **uses modified heat shock proteins to stimulate an immune response against multiple antigens**contained within cancer cells while most other immunotherapy approaches target only a single antigen. Cancer cells express different antigens that can be used to initiate an immune response. Each *ImPACT* vaccine is created from a native tumor-cell line that we believe expresses the widest array of antigens common to a particular type of cancer. This "pan-antigen" approach provides each patient with a higher likelihood of a response to the therapy.

(ii) Heat's vaccines are "off-the-shelf" (allogeneic) and are therefore far less expensive to manufacture than patient-specific (autologous) vaccines. Heat's vaccines are mass-produced from a single source while other immunotherapy approaches require physicians to extract a patient's blood and/or cells, send them to a lab where a personalized vaccine is created, and then have them shipped back to the physician for injection into the patient.

(iii) While there are competing companies that are developing therapies that are both "off-the-shelf" and which target multiple antigens,**Heat's *ImPACT* technology is the only known "off-the-shelf" (allogeneic) vaccine that directly induces "cross-presentation" to the CD8+ ("killer") T cells, which are the cytotoxic arm of the immune system.** Stimulating these CD8 (killer) T cells through "cross-presentation" has recently been shown to be critical to the induction of effective anti-tumor immunity.[13] Heat is able to leverage gp96 to serve as its own powerful immune stimulant (adjuvant) while other companies' technologies rely on the use of a secondary adjuvant like GMCSF or Alum.

Our Product Candidates and Clinical Development Programs

We have initiated a clinical development program to target our ImPACT technology platform against a range of diseases, including non-small cell lung cancer, bladder cancer, breast cancer and ovarian cancer. We have filed to initiate a Phase II clinical trial with our first therapeutic vaccine, HS-110, against non-small cell lung cancer ("NSCLC") in early 2013, and we are planning to initiate a Phase I clinical trial for bladder cancer in mid-2013. We plan to initiate Phase I trials for breast and ovarian cancer in 2014 , pursuant to receiving additional non-dilutive grants and/or other financings. We are also completing an advanced study in primates for the development of a therapeutic and prophylactic vaccine for the treatment and prevention of HIV. This study continues to be fully funded by the NIH.

13 Ll Hildner K, Edelson BT, Purtha WE, Diamond M, Matsushita H, Kohyama M, Calderon B, Schraml BU, Unanue ER, Diamond MS, Schreiber RD, Murphy TL, Murphy KM. Science. 2008 Nov 14; 322(5904):1097-1100.

Summary of HS-110 Clinical Trials

Phase I HS-110 Clinical Trials

Background
A Phase I clinical trial with HS-110 in patients with very late stage IIIB/IV non-small cell lung cancer (NSCLC) was completed at the Sylvester Comprehensive Cancer Center with a total of 18 patients dosed. The primary purpose of this trial was to demonstrate safety of HS-110, while the secondary endpoints were the induction of gp96-Ig specific immune responses and the overall survival rate. The patients were divided into 3 arms. Due to statistical and safety considerations, the patients in the trial were not evenly divided among the three arms. Arm 1, which consisted of 11 patients, received 40 million cells every two weeks for 18 weeks, arm 2, which consisted of 4 patients, received 20 million cells every week for 18 weeks and arm 3, which consisted of 3 patients, received 10 million cells twice a week for 18 weeks.

Our Phase I trial was conducted as an investigator-sponsored IND and was fully funded by the NIH. The criteria for inclusion was: (i) patients with histologically confirmed NSCLC stage IIIB, stage IV, or recurrent disease; (ii) at least one site of bi-dimensionally measurable disease; (iii) treated brain metastasis must be stable by CT scan or MRI for at least 8 weeks; (iv) patient must have received and failed at least two lines of therapy (one of them erlotinib); (v) age ≥ 18 years; ECOG performance status 0-2; life expectancy ≥ 3 months; and (vi) signed informed consent.

The median age was 67 years (range 38-86). There were no serious adverse events. Most adverse events were grade 1 or 2 involving transitory erythema and skin induration. Seven of 18 (39%) patients achieved disease stabilization for a clinical benefit of 39% .. Median survival was 8.1 months. In 11 of 15 patients (73%) there was a twofold or greater increase CD8 cells secreting interferon gamma (CD8-CTL IFN-γ) following vaccination, and these patients showed a median survival of 16.5 months. There were no serious adverse events (SAE) or immune related events (IRE) with the vaccine or the vaccinations. Most of the adverse events (AEs) were grade 1 or 2 and involved erythema and skin in duration that were transitory and usually resolved in 1-2 weeks.

Our preliminary Phase I results indicate that HS-110 may significantly increase median survival for responding patients as compared to historical controls. For this analysis, the overall survival of the patients on the trial is compared to published historical controls. The historical control used for this analysis was determined using a meta-analysis of patients with stage IIIB/IV NSCLC with an equivalent performance status (0-1) of the patients on the current trial who had failed 4 prior lines of therapy. The patients enrolled in our trial had failed an average of 7 prior lines of therapy. Although preliminary in nature, the data indicates that the patients treated with the HS-110 vaccine may have an increase in survival over historical controls both in terms of median survival and overall survival. It is also important to note that, based upon IND requirements and the randomization protocol then in place, 11 of the 18 patients enrolled in the trial at the time of the interim analysis were on arm 1, the least frequent dosing arm which was administered once every two weeks, which is expected to be the least effective based on preclinical studies. Other patients were enrolled in arms 2 and 3, where we would anticipate improved responses in patients due to the more frequent dosing schedule.[14] To date, several patients' disease have stabilized, including some patients with very large primary lesions in the lung as well as multiple distant metastatic sites, including the liver and lymph nodes.

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14 Thus far, patient-immune responses exhibit HS-110 dose dependent increase in patient CD8+ T cells activation.

HS-110 Well Tolerated

HS-110 was well tolerated. There were no serious adverse events (SAEs) that were considered to be related to the vaccine. Most of the adverse events (AEs) were reported as mild or moderate (grade 1 or 2) with the most frequent being skin induration and rash that were transitory and usually resolved in 1 to 2 weeks. There were no immune-related events with the vaccine or the vaccinations.

Based upon these Phase I results, HS-110 appears to be safe and capable of generating CD8-CTL IFN-γ immune responses in patients with advanced NSCLC. The vaccine was not associated with any serious adverse events (SAEs). Skin reactions at the vaccination site were minimal and of short duration and there was no evidence of the generation of any autoimmune phenomena. In lieu of a dose escalation design, the design of the Phase I trial involved increasing the frequency of vaccination, while still retaining the total dose of vaccine cells administered. A more frequent vaccination schedule caused increased tumor rejection in preclinical models and also anecdotally appeared to be of benefit in this study.

Positive Immunological Response

HS-110 generated strong immune responses in most patients. In 11 of the 15 patients completing the first course of therapy (73%) there was a twofold or greater increase CD8 cells secreting interferon gamma (CD8-CTL IFN-γ) following vaccination, and these patients showed a median survival of 16.5 months.

Since NSCLC is known to be highly immunosuppressive, we believe that by overcoming tumor-induced-suppression with frequent vaccinations as observed anecdotally in the Phase I study and the generation of an observed potent polyepitope specific CD8 CTL is highly encouraging and warrants further study.

Clinical Benefit

HS-110 appears to provide clinical benefit to 73% of patients that respond to the therapy. Clinical benefit is defined as evidence of improved symptomology, disease control, progression-free survival or overall survival as compared to matched historical controls (i.e. patients with advanced NSCLC who have progressed on 2 or more prior therapies). Seven of 15 patients completing the first course of therapy (39%; 95% CI: 17.3- 64.3%) achieved disease stabilization after the first course of vaccinations (6 weeks) and 8 patients had disease progression. The Kaplan Meier estimate of median time to progression was 1.4 months (95% CI: 1.3-2.7), and the PFS rates at 1, 2 and 3 months were 88.9% (95% CI: 62.4- 97.1%), 38.9% (95% CI: 17.5-60.0%), and 11.1% (95% CI: 1.9-29.8%), respectively. Of note, two patients remained progression free for just over 7 months.

The typical median survival period for late-stage lung cancer is 4.5 months for patients who are not receiving any treatment. As of February, 2012, 2 of the 15 patients who completed the first course of therapy remain alive and have been followed for 29.0, and 46.8 months, respectively. The Kaplan-Meier estimate of median survival was 8.1 months (95% CI: 6.7- 18.2), and the 1, 2, and 3-year OS rates were 44.4% (95% CI: 21.6-65.1%), 19.0% (95% CI: 4.8- 40.3%), and 9.5% (95% CI: 0.8-32.1%), respectively.

In summary, based on the results of this Phase 1 trial in 18 patients, HS-110 appears to be well-tolerated and capable of generating CD8-CTL IFN-γ immune responses in patients with advanced NSCLC. We believe that clinical benefit, based on stabilization of disease and overall survival, was observed with the overall rate of survival above the historically expected rate for these heavily pretreated patients with very poor prognoses.

Adverse Events by Body System

Body System	Number of Events (N=219)	Severity Grade (# of events)
Inspection Site Reactions	166 (75.8%)	Grade 1 (166)
Respiratory System	9 (4.1%)	Grade 2(5)
Body As a Whole (general disorders including fever)	8(3.7%)	Grade 1(4) Grade 2(3)[a] Grade 3(1)[b]
Nervous System	8(3.7%)	Grade 2(1)
Musculoskeletal	7(3.2%)	Grade 2(5)
Digestive System	7(3.2%)	Grade 1(7)
Metabolic and Nutrition	6(2.7%)	Grade 1(6)
Skin and Appendages (non-injection site reactions)	4(1.8%)	Grade 2(1)
Cardiovacsular System	2(0.9%)	Grade 2(1)
Urogenital System	1(0.5%)	Grade 1(1)
Endocrine System	1(0.5%)	Grade 2(1)
Hemic and Lymphatic		

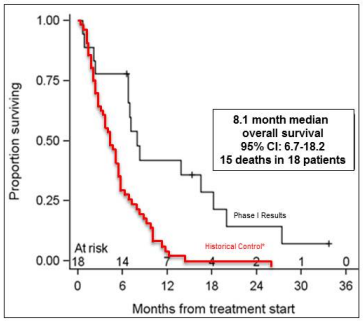
a All grade 2 AEs except 4 were classified as non-related to treatment. The grade 2 treatment-related AEs were 1 musculoskeletal event (joint pain) rated as definitely related. 1 musculoskeletal event (knee weakness) rated as possibly related. 1 endocrine event (hot flashes) rated as unlikely related and 1 skin event (pruritus) rated as unlikely related.
b The single grade 3 AE was in the body as a whole category (fatigue) and was rated as possibly related.

Injection Site Reactions

Injection Site Reaction (ISR)	Number of Events (N = 166)
Pain	17 (10%)
Induration	58 (35%)
Pruritus	8 (5%)
Hyperpigmentation/Discoloration	3 (2%)
Rash	78 (47%)
ISR non-specific	2 (1%)

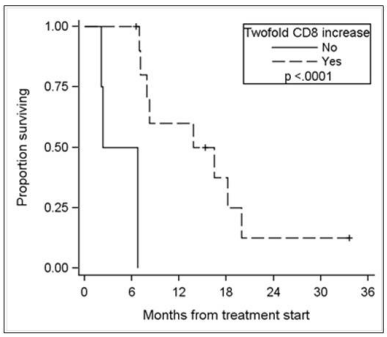
Positive Phase I Trial Results

- No Serious Adverse Events
- 73% of patients exhibited a highly activated immune response
- Improved 1-year survival
  - 5% for historical control*
  - 44% for HS-110 treated
- Significant extension in progression-free survival based on dosing density



** Massarelli E. Lung Cancer;2003:39 – Meta Analysis*

Immune Response Predictive of Survival



15 patients measured - 11 positive CD8 increase, 4 no change

Patients demonstrating ≥ doubling of immune response show highly significant increases in survival from 4.5 months to 16.5 months+ (p≤0.0001)

ONCOLOGY INDICATIONS of *ImPACT*

Lung Cancer

Disease

Lung cancer is the leading cause of cancer-related death in the United States. According to the National Cancer Institute, in 2012, lung cancer is expected to account for 26% of all female cancer deaths and 29% of all male cancer deaths. An expected 226,160 people will be diagnosed with lung cancer in the United States in 2012. Of these lung cancers, roughly 85-90% will present as non-small cell lung cancer. Patients with advanced clinical stage IIIA/IV disease visible on chest radiography have a 5-year survival rate as low as 2-5%.

Clinical Development

Our technology was the subject of an investigator initiated Phase I clinical trial conducted at the Sylvester Cancer Center for the treatment of Non-Small Cell Lung Cancer ("NSCLC" or "lung cancer") to establish safety and proof of concept clinical efficacy.

After completion of the 18 patient Phase I trial, we successfully opened a new IND to conduct additional trials with HS-110 in patients with NSCLC. Our Phase II study has been designed as a maintenance therapy study in patients with Stage III/IV NSCLC who have completed a 1^{st} line regimen consisting of a platinum doublet, crizotinib or erlotinib and achieved at least stable disease. The trial is structured as a multicenter randomized, active controlled add-on dosing study to evaluate the immune response, safety and efficacy endpoints of HS-110 when administered weekly for 18 weeks in patients with non-small cell lung cancer (NSCLC). We anticipate opening approximately 15-20 clinical sites and enrolling approximately 300 patients with an expected enrollment period of 2.5 years. The trial is a 3-stage, randomized, double-blind, placebo-controlled design. In stage 1 (dose-finding), patients will be randomized to either placebo treatment, low dose HS-110 (2×10^6 cells) or high dose HS-110 (1×10^7 cells), administered weekly for 18 doses (18 weeks). In stage 2 (proof of concept), patients will be randomized to either placebo treatment or HS-110 at the dose determined to produce the optimal immune response in Stage 1. In Stage 3 (biocomparability), patients will be randomized to one of two dose preparations of HS-110 administered weekly for 18 weeks at the dose determined to produce the optimal immune response in Stage 1. The primary endpoint in Stages 1 and 3 will be immune response; the primary endpoint in Stage 2 will be progression-free survival. All stages will examine additional secondary endpoints including overall survival.

Bladder Cancer

Disease

In the United States, bladder cancer is the fourth most common type of cancer in men and the ninth most common cancer in women. According to the National Institutes of Cancer, 1 in 42 men and women will be diagnosed with bladder cancer during their lifetime, a total of more than half a million patients in the US. There are more than 70,000 cases of bladder cancer diagnosed each year in the U.S., resulting in over 14,000 deaths per year. Available treatments are currently not effective, thus this remains an area of high unmet need.

Clinical Development

The Bladder Cancer Phase I/II Trial

cGMP-grade cell lines are currently being developed that will be used to treat patients with advanced bladder cancer. It is anticipated that these cellular vaccines will be completed by the 2nd quarter of 2013, with a Phase I/II clinical trial beginning thereafter. In parallel with our clinical development plans, we have engaged a vendor as our clinical grade contract manufacturer for our future potential Phase III trial.

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15 http://www.cancer.gov/cancertopics/pdq/treatment/non-small-cell-lung/healthprofessional.

Preparation of IND documents in support of HS-410 for bladder cancer are in progress. We anticipate a pre-IND meeting will be scheduled in early 2013 with IND activation in Q2, 2013. This initial IND will include a 93 patient, Phase I/II trial to examine safety, tolerability, immune response and preliminary clinical activity of HS-410 in patients with high risk, superficial bladder cancer who have completed surgical resection and 6 weekly intravesical bacillus Calmet-Guerin (BCG) immunotherapy installations. We anticipate including approximately 8-10 clinical sites with an enrollment period of 12-18 months.

The Phase I portion will randomize 18 patients in 1:1 fashion to either a high or low dose group. Patients will receive weekly intradermal injections of HS-410 for 18 weeks and immune response will be evaluated at baseline, week 6, week 12 and week 18. The first 4 patients in each dose group will be enrolled at 2 week intervals to allow opportunity to assess safety and tolerability of HS-410. At the completion of the Phase I program, the dose resulting in the optimal immune response will be advanced to Phase II. In the phase II portion, 75 patients will be enrolled in 2:1 fashion to HS-410 or placebo. Primary endpoint will examine time to 1st recurrence of bladder cancer. Other endpoints will include recurrence rate, progression rate and immune response.

Triple Negative Breast Cancer

According to the National Cancer Institute, there will be 229,060 new cases of breast cancer diagnosed in 2012. Approximately 10-20% of those cases will be triple negative breast cancer (TNBC), an aggressive form of the disease marked by earlier age of onset, worse clinical outcome, and a higher rate of local relapse. This disease cannot be treated by hormone therapy or receptor-directed monoclonal antibodies. New approaches for treatment to prevent relapse in this disease after early treatment need to be investigated.

Clinical Development

The TNBC Phase I Trial

cGMP grade cell lines are currently being developed that will be used to treat patients with TNBC. It is anticipated that these cell lines will be completed by the 2nd quarter of 2013, with a Phase I clinical trial in early 2014.

Ovarian Cancer

Disease

Ovarian cancer accounts for about 3% of all cancers among women and ranks the second among gynecologic cancers. According to the National Cancer Institute, an estimated 22,280 new cases are expected in the US in 2012. Ovarian cancer causes more deaths than any other cancer of the female reproductive system, and will lead to an estimated 15,500 deaths in the United States in 2012.[16] Due to the prevalence of ovarian cancer and its poor prognosis, particularly when discovered late, the development of novel therapeutics for the treatment of ovarian cancer is a high priority.

Clinical Development

To address this problem, cGMP-grade cellular vaccines are being developed that will be used to treat patients with advanced serous ovarian carcinoma. It is anticipated that these cell lines will be completed by early 2013, with a Phase I clinical trial pending the availability of adequate funding.

16 http://www.cancer.gov/cancertopics/pdq/treatment/ovarianepithelial/HealthProfessional.

Other Cancers

Our *ImPACT*-technology is a broad based approach and can be used to combat a variety of cancers. We are in the process of identifying available cell lines, such as pancreatic cancer, melanoma, glioblastoma, and vesicular lymphoma. We expect to have several additional *ImPACT*-based products in the clinic in 2013.

Infectious Diseases

To date, over $4,000,000 in governmental and institutional funding has been provided to the inventor of the technology we license for HIV and hepatitis C virus (HCV) research using our *ImPACT*-technology. We do not intend to use any of the proceeds of this Offering to further any HIV or HCV research and instead plan to conduct additional research with respect to the use of our *ImPACT*-technology for the treatment of such diseases solely through additional governmental and institutional grants, if any, that may be received.

Manufacturing

We rely on third-party manufacturers to produce and store our product candidates for clinical use and currently do not own or operate manufacturing facilities. The HS-110 used in our Phase I and Phase II clinical trials was and is currently manufactured by our cGMP contractors under current good manufacturing practices (cGMP). The Company has completed production of clinical grade material for our Phase II clinical studies. We have retained a vendor to manufacture the HS-110 to be used in our potential Phase III clinical trials and commercialization.

We have retained a vendor, who has begun production of HS-110 to be used in our Phase III clinical trials. We entered into an eight year Manufacturing Services Agreement, dated October 19, 2011, with the vendor (the "Manufacturing Agreement"). The Manufacturing Agreement provides that the vendor will manufacture products based on our *ImPACT* technology intended for use in pharmaceutical or medicinal end products, including, without limitation, products in a final packaged form and labeled for use in clinical trials or for commercial sales to end users in accordance with the terms and conditions of individual statements of work. The Manufacturing Agreement requires that we purchase certain minimum amounts each year from the vendor. The Manufacturing Agreement may be terminated by the parties upon mutual agreement, and by each party for a material breach by the other party that is not cured within the cure period , upon notice that a clinical trial for which product is being produced under the agreement is suspended or terminated or upon the other party's insolvency, dissolution or liquidation.. In addition, we entered into a convertible note with the vendor that will convert to equity upon consummation of this Offering at the Offering Price. The maximum outstanding amount that we may borrow under the convertible note at any one time is $950,000. The note accrues interest at a rate of 12% per year payable at maturity. As of December 31, 2012, there is $197,099 outstanding under the convertible note. The Manufacturing Agreement allows the vendor to treat unpaid invoices as advances of principal under the convertible note. For a period of one year following conversion of the note, the vendor is entitled to designate an observer to attend all of our board meetings.

The HS-110 used in our clinical trials was and is currently manufactured under current good manufacturing practices (cGMP). The vaccine is grown in large quantities and quality tested according to FDA guidelines. Following testing, the vaccine is irradiated, which is a commonly used attenuation process that eliminates the ability of the gp96-Ig-containing vaccine cell lines from replicating, but allows it to continue secreting gp96-Ig for a period of several days. Quality tested, irradiated batches of the vaccine are then dispensed into individual doses and frozen in liquid nitrogen. These batches of frozen vaccines are stable for long periods of time, and are thawed immediately prior to administration to patients. Sufficient material to complete the phase I/II study has already been produced, and preparations are underway to produce quantities required for subsequent clinical trials.

Competition

The pharmaceutical industry and biologics industry are each highly competitive and characterized by a number of established, large pharmaceutical companies and other companies, as well as smaller companies like ours. If our competitors market products that are less expensive, safer or more effective than any future products developed from our product candidates, or that reach the market before our approved product candidates, we may not achieve commercial success. Technological developments in our field of research and development occur at a rapid rate and we expect competition to intensify as advances in this field are made. We will be required to continue to devote substantial resources and efforts to our research and development activities.

As a biotech company with a cancer immunotherapy as its lead therapeutic, we compete with a broad range of companies. At the highest level, cancer immunotherapy can be seen as both a complement and a potential competitor to any oncology therapy, most notably chemotherapy, biologics and small molecule drugs. Not only do we compete with companies engaged in various cancer treatments including radiology and chemotherapy but we also compete with various companies that have developed or are trying to develop an immunology vaccine for the treatment of cancer. Certain of our competitors have substantially greater capital resources, large customer bases, broader product lines, larger sales forces, greater marketing and management resources, larger research and development staffs and larger facilities than ours and have more established reputations as well as global distribution channels that may be more effective than ours. Our most significant competitors, among others, are fully integrated pharmaceutical companies such as Eli Lilly (Alimta), Bristol-Myers Squibb (Erbitux) and Sanofi-Aventis (Eloxatin), and more established biotechnology companies such as Roche/Genentech (Avastin and Tarceva), and competing cancer autologous immunotherapy companies such as Dendreon and others which have substantially greater financial, technical, sales, marketing, and human resources than we do. These companies might succeed in obtaining regulatory approval for competitive products more rapidly than we can for our products. In addition, competitors might develop technologies and products that are cheaper, safer or more effective than those being developed by us or that would render our technology obsolete. In addition, the pharmaceutical and biotechnology industry is characterized by rapid technological change. Because our research approach integrates many technologies, it may be difficult for us to remain current with the rapid changes in each technology. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Our competitors may render our technologies obsolete by advancing their existing technological approaches or developing new or different approaches.

We expect to compete with other pharmaceutical and biotechnology companies, and our competitors may:

- develop and market products that are less expensive, more effective or safer than our future products;
- commercialize competing products before we can launch any products developed from our product candidates;
- operate larger research and development programs, possess greater manufacturing capabilities or have substantially greater financial resources than we do;
- initiate or withstand substantial price competition more successfully than we can;
- have greater success in recruiting skilled technical and scientific workers from the limited pool of available talent;
- more effectively negotiate third-party licenses and strategic relationships; and
- take advantage of acquisition or other opportunities more readily than we can.

We expect to compete for market share against large pharmaceutical and biotechnology companies, smaller companies that are collaborating with larger pharmaceutical companies, new companies, academic institutions, government agencies and other public and private research organizations.

Many major pharmaceutical companies have at least one immunotherapy drug or therapeutic in development, either directly or in partnership with a smaller biotech firm. Some of our competitors that are developing competitive immunology drugs and therapeutics include Merck kGaA/Oncothyreon's Stimuvax for the treatment of breast cancer and NSCLC; Transgene and its product TG4010 for the treatment of NSCLC lung cancer; GlaxoSmithKline and its product MAGE-A3 for the treatment of melanoma, NSCLC, multiple myeloma and squamous cell carcinoma; Oxford BioMedica and its product TroVax for the treatment of prostate, kidney and colorectal cancer); NewLink Genetics and its treatment for pancreatic cancer and lung cancer; Celldex/Pfizer and their product CDX-110 for the treatment of malignant brain cancer; and Dendreon and its product Provenge for the treatment of prostate cancer.

The primary treatments for non-small cell lung cancer are surgery, radiation, chemotherapy and various combinations of each of these treatments. A large number of patients, particularly with advanced disease, are refractory to these treatments and are subsequently treated with a number of emerging biologic agents, including immunotherapy. Some examples of therapies commonly attempted with stage IIIB/IV NSCLC patients include: Alimta (pemetrexed), Avastin (bevacizumab), Tarceva (EGF inhibitor), Gemzar (gemcitabine), Erbitux (cetuximab), Carboplatin, Taxol, VP16 and Arlibercept. It is unlikely that biologic agents will compete with more traditional therapies in the short-term, but many oncologists believe that such therapies will eventually become the mainstay of lung cancer therapy. None of these agents have proven particularly effective for stage IIIB/IV NSCLC patients, with the most effective therapies only increasing survival by a few months. As a result, we do not consider these agents to be direct competitors to HS-110 because they are likely to be given either in sequence or in conjunction with some of the agents listed. Furthermore, many patients cannot tolerate many of the chemotherapeutics listed. Thus, if the positive safety profile of HS-110 continues (without observation of local or systemic toxicities, none of which have been seen to date), it is likely that HS-110 would be preferred both by physicians and patients in this stage of disease.

As previously stated we compete with other forms of cancer treatment such as biologic therapies in addition to immunology therapies. There are several biologic therapies in clinical development against NSCLC that have been identified as potential competitors to HS-110. In particular, a cell-based vaccine therapy, Lucanix, is in development by NovaRx. Lucanix has entered phase III clinical trials. Should Lucanix receive FDA approval before HS-110, it might facilitate the FDA approval of HS-110 because it is also a cell-based immunotherapy. Approval of Lucanix could, however make the marketing and acceptance of HS-110 more difficult because it would represent a direct competitor. We believe HS-110 represents a superior approach to Lucanix, because Lucanix does not contain any mechanism of specific immune activation.

Our strategy is to emphasize what we believe to be our competitive advantages which are that our therapy will have less side effects than most other chemotherapies, will be available at lower prices than other therapies and will work on almost all types of cancer and not just one specific type.

Although all chemotherapy drugs have severe side-effects such as overall damage to the immune system, not only to cancerous cells, leading to hair loss, nausea and vomiting, and considerable pain, etc. and the side effects from immunotherapy are vastly reduced if not eliminated because immunotherapy works with the body's own immune response, we will still compete with chemotherapy drugs and therapeutics in the market. Treatments such as Interferon sell for approximately $30,000 per course of therapy, and Interferon has side effects similar to those of chemotherapy. Single agent chemotherapies are priced between $500 and $5,000 per course of therapy. More and more commonly however, chemotherapy is not given as single agent therapy; when given in combined regimens, the cost can easily escalate to upwards of $10,000-$20,000 per course.

- According to Schreiber et. al., patient-specific vaccines are not more effective than off-the shelf vaccines such as HS-110 in reducing tumors.[17] Furthermore, patient-specific vaccines cost far more to produce than off the shelf (allogeneic) vaccines such as Heat's HS-110, where any donor tissue can be used. For example, FDA-approved patient-specific Provenge is estimated to cost $93,000 for a typical three dose treatment. Over 95% of newly developed cancer immunotherapies cost over $20,000 per course of treatment.

Grant Funding

To date, in excess of $13,000,000 in grants, have been awarded to to the primary inventor of the technology we license to fund development of ImPACT technology and clinical trials upon which our clinical programs are based. We have little control over the direction of the NIH grant funds that have been received by the primary inventor of the technology we license and since payment is made to the inventors as opposed to us we do not recognize any revenue from such grant funds nor do they fund any expenses that we incur. Although earmarked for further development of the technology that we license, any funds awarded to the primary inventor are used in his discretion and we have little control over his use of the funds.

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17 Schreiber, TH, et al. Tumor Immunogenicity and Responsiveness to cancer vaccine therapy: The State of the Art. Semin Immunol (2010), doi:10.1016/j.smim.2010.02.001.

Grant awards for development of *ImPACT*

Grant Title	Granting Organization	Amount
Regulation of Anti-Tumor Immunity	NIH	$4,922,000
Molecular Mechanism of Anti-Tumor and Anti-Bacterial Cytotoxicity	NIH	$2,532,000
Mechanisms of mucosal protection by HPV-SIV and gp96-Ig-SIV vaccines	NIH	$2,000,000
Systemic and mucosal HIV-immunity by HSP-gp96 vaccines	NIH	$451,000
Induction of mucosal SIV immunity in non-human primates by secreted HSP-gp96	NIH	$2,125,000
Clinical Translation of Gene Therapy for Lung Cancer Award Recipient	Alliance for Cancer Gene Therapy	$1,000,000
Clinical Translation of Gene Therapy for Lung Cancer Award Recipient	State of Florida	$100,000
QTDP Grant	Dept. of Treasury	$244,000

Intellectual Property

License Agreements and Intellectual Property

Our goal is to obtain, maintain and enforce patent protection for our products, formulations, processes, methods and other proprietary technologies, preserve our trade secrets and rights in our unique biological materials, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our policy is to actively seek to obtain, where appropriate, the strongest intellectual property protection possible for our current product candidates (*ImPACT* therapy) and any future product candidates, proprietary information and proprietary technology through a combination of contractual arrangements and patents, both in the U.S. and abroad. However, even patent protection may not always afford us with complete protection against competitors who seek to circumvent our patents. See “Risk Factors - Risks Relating to Our Business” – “We have limited protection of our intellectual property.”

We will continue to depend upon the skills, knowledge and experience of our scientific and technical personnel, as well as that of our advisors, consultants and other contractors, none of which is patentable. To help protect our proprietary know-how, which is not patentable, and for inventions for which patents may be difficult to enforce, we currently rely and will in the future rely on trade secret protection and confidentiality agreements to protect our interests. To this end, we require all of our employees, consultants, advisors and other contractors to enter into confidentiality agreements that prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

License Agreements

In July 2008, we entered into an exclusive license agreement with the University of Miami (the “University”) for *ImPACT*, technology, which was subsequently assigned to our subsidiary Heat Biologics I, Inc. which issued to the University shares of its Common Stock representing seven and one half percent (7.5%) of its Common Stock, of which 5% is non-dilutable until such time as we receive cash proceeds of at least $2,000,000 in equity investments. The term of the license is the length of the last to expire patent, unless terminated earlier. We obtained exclusive, worldwide rights to make, use or sell licensed materials based upon the following U.S. patent applications:

- Serial number 60/075.358 entitled “Modified Heat Shock Protein-Antigenic Peptide Complex” and filed on February 20, 1998; Serial number 09/253,439 entitled “Modified Heat Shock Protein-Antigenic Peptide Complex” and filed on February 19, 1999;

- Serial number 11/878,460 entitled "Recombinant Cancer Cell Secreting Modified Heat Shock Protein-Antigenic Peptide Complex" and filed on July 24, 2007; all U.S. patents and foreign patents and patent applications based on these U.S. applications; as well as all divisionals, continuations, and those claims in continuations-in-parts (to the extent they are sufficiently described in the '358, '439, or '460 applications) of the foregoing, and any re-examinations or reissues of the foregoing (the "IP License"). The foregoing includes certain foreign patents and patent applications as well. The IP License also provided an option to negotiate a worldwide, exclusive license to improvements.

As consideration for the rights granted in the license agreement, we agreed to pay the University upfront license fees and additional yearly payments under each license. We are responsible for all patent costs, past and future, associated with the preparation, filing prosecution, issuance and maintenance of the applications. In addition, the agreements contain certain milestone payments as well as royalty payments equal to a percentage of net sales if a product incorporating the licensed technology is commercialized. In the event that we sublicense the licensed technology to a third party, we are obligated to pay royalties to the University equal to a percentage of what we would have been required to pay to the University had we sold the amount of the product ourselves. The license agreements provide that the licensor has the right to terminate the license if we have not introduced, or at least used our best efforts to introduce, a licensed product in the commercial marketplace in the US, EU, or Japan by a December 31, 2020; and otherwise exercise diligence to bring licensed products to market or in the event of our insolvency or bankruptcy. In addition, either party has a right to terminate the license agreement upon a material breach of an obligation under the license agreement by the other party if such breach is not cured and we have the right to terminate upon 90 days notice. In the event of a termination, we are obligated to pay all amounts that accrued prior to such termination. In the event that we breach a material term of one or both of the license agreements, the University has the option to terminate the agreement following the giving of notice and an opportunity to cure any such breach. The license agreement also contains other customary clauses and terms as are common in similar agreements between industry and academia.

In February 2011, our subsidiary, Heat Biologics I, Inc., entered into several additional exclusive license agreements with the University related to the first agreement. The terms of the licenses are the length of the patent that is last to expire, unless terminated earlier. In the IP License, we obtained exclusive, worldwide rights to make, use or sell licensed materials based upon the following U.S. patent applications:

- Serial number 61/347,336 entitled "Cancer Treatment" and filed on May 21, 2010, all U.S. patents and foreign patents and patent applications based on these U.S. applications; as well as all divisionals, continuations, and those claims in continuations-in-parts (to the extent they are sufficiently described in the applications) of the foregoing, and any re-examinations or reissues of the foregoing.

- Serial number 61/033,425 entitled "Allogeneic Cancer –Based Immunotherapy" and filed on March 3, 2008 and PCT 2009/001330 "Allogeneic Cancer –Based Immunotherapy" filed on March 3, 2009, as well as all divisionals, continuations, and those claims in continuations-in-parts (to the extent they are sufficiently described in the applications) of the foregoing, and any re-examinations or reissues of the foregoing.

- Serial number 61/033,425 entitled "Heat Shock Protein GP96 Vaccination and Methods of Using Same" filed on March 20, 2008 and PCT 2009/001727 "Heat Shock Protein GP96 Vaccination and Methods of Using Same "filed on March 19, 2009, as well as all divisionals, continuations, and those claims in continuations-in-parts (to the extent they are sufficiently described in the applications) of the foregoing, and any re-examinations or reissues of the foregoing.

As consideration for the rights granted in the license agreements, we agreed to pay the University certain upfront license fees, past patent fees as well as royalties equal to a percentage of net sales on commercialized products incorporating the licensed technology. In the event that we sublicense the licensed technology to a third party, we are obligated to pay royalties to the University equal to a percentage of what we would have been required to pay to the University had we sold the amount of the product ourselves. The license agreements provide that the licensor has the right to terminate the license if the licensee has not introduced, or at least use it best efforts to introduce, a licensed product in the commercial marketplace in the US, EU, or Japan by December 31, 2020; and otherwise

exercise diligence to bring licensed products to market or in the event of our insolvency or bankruptcy. In addition, either party has a right to terminate the license agreement upon a material breach of an obligation under the license agreement by the other party if such breach is not cured and we have the right to terminate upon 90 days notice. In the event of a termination, we are obligated to pay all amounts that accrued prior to such termination.

In addition to the licenses obtained from the university, we have entered into agreements with (i) Val-Chum/Centre Hospitalier De L'Universite De Montreal; (ii) the Regents of the University of Michigan; and (iii) the American Type Culture Collection ("ATCC") for the evaluation of certain biological materials.

In October 2011, we entered into an exclusive license agreement with Val Chum, Limited Partnership and Centre Hospitalier De L'Universite De Montrealto make, use, develop, manufacture, distribute, export, import, commercialize, market, sell, or otherwise commercially exploit cancer vaccines made with various proprietary ovarian carcinoma cells lines. The term of the license is perpetual, unless terminated earlier by Val-Chum or us .. As consideration for the rights granted in the license agreement, we agreed to pay Val-Chum an up-front license fee and additional yearly payments. The agreement contains certain milestone payments as well as royalty payments based on net sales if a product incorporating the licensed technology is commercialized. In the event that we sublicense the licensed materials or processes based thereon to a third party, we are obligated to pay royalties to Val-Chum equal to a percentage of what we would have been required to pay had we sold the amount of the product ourselves. The license agreement provides that the licensor has the right to terminate the license should we cease to carry on our business, fail to make a required payment or otherwise materially breach or default in our obligations under the license agreement following the giving of notice and an opportunity to cure any such breach.

The license agreement also contains other customary clauses and terms as are common in similar agreements between industry and academia.

In July 2011, we entered into an exclusive license agreement with the University of Michigan to use, market, offer for sale, sell and/or sublicense materials and processes related to certain bladder cancer cell lines. The term of the license is perpetual, unless terminated earlier by us or by the University of Michigan. As consideration for the rights granted in the license agreement, we agreed to pay the University of Michigan up-front license fees and additional yearly payments. We also assumed under the license agreement responsibility if the licensed materials are deemed to infringe any upon any patent or other rights. The agreement contains certain milestone payments as well as royalty payments based on net sales if a product incorporating the licensed technology is commercialized by us or a sublicensee. The license agreements provide that the licensor has the right to terminate the license should we cease to carry on our business, fail to make a required payment or otherwise materially breach or default in our obligations under the license agreement following the giving of notice and an opportunity to cure any such breach. The license agreement provides that if we do not achieve the following milestones within the required period, the University of Michigan has the right to terminate the license agreement: completion of a Phase I clinical trial on or before January 1, 2015, a Phase II clinical trial on or before January 1, 2017, a Phase III clinical trial on or before January 1, 2019 and the first commercial sale of a product that includes the materials supplied by the University of Michigan on or before January 1, 2020. The license agreement also contains other customary clauses and terms as are common in similar agreements between industry and academia.

In April 2011 we entered into an evaluation and biological material license agreement with the American Type Culture Collection ("ATCC"). The agreement with ATCC provides for an evaluation term of twelve months subject to two additional renewals and a non-exclusive commercial use license upon termination of the evaluation period to utilize the products we obtain in the evaluation to develop, make, use and sell licensed products. The agreement with ATCC has a term of forty years. The license requires certain milestone payments upon initiation of and progression through clinical trials and marketing authorization.

Intellectual Property

Under the license agreements with the University of Miami, we have obtained exclusive rights to five different patent families directed to therapeutic compositions and methods related to our vaccine platform and preclinical development program for cancer. These families comprise five PCT applications, seven granted patents, sixteen patent validations in European countries, one allowed patent application and thirty seven other pending patent applications. These patents and applications cover the United States, Europe and Japan as well as several other

countries having commercially significant markets. For each platform or program, our decision to seek patent protection in specific foreign markets, in addition to the U.S., is based on many factors, including one or more of the following: our available resources, the size of the commercial market, the presence of a potential competitor or a contract manufacturer in the market and whether the legal authorities in the market effectively enforce patent rights. The patent families associated with our *ImPACT* platform are:

A. "Recombinant cancer cell secreting modified heat shock protein-antigenic peptide complex."

This family of patent filings relates to methods and compositions for enhancing an immune response. More particularly, the application describes the creation of a tumor cell therapy including a cancer cell that has been engineered to secrete a heat shock protein (gp96), and the use of such therapy to enhance an anti-tumor immune response. Within this family are one pending US application, one granted Australian patent, one pending Canadian application, one pending European application, two granted European patents (collectively validated in 16 countries), one pending Japanese application, and one granted Japanese patent. Not including any patent term adjustments or extensions (e.g., for patent office delays or extensions/exclusivity periods provided for new drug approvals in the US and some foreign countries), the term for patents in this family extends until 2019.

B. "Heat Shock Protein gp96 Vaccination and Methods of Using Same"

This family of patent filings also relates to methods and compositions for enhancing an immune response. It further describes: (a) how intraperitoneal gp96-Ig administration increases recruitment of innate immune cells into the administration site, mediates proliferation of dendritic cells (DCs) and CD8 cells, and activates natural killer (NK) cells; (b) that gp96-Ig-secreting cell vaccines are more effective when gp96-Ig is continuously released; (c) that frequent gp96 immunizations can overcome tumor-induced immune suppression and retards tumor growth; and (d) that B cell depletion can enhance gp96-Ig -mediated recruitment of NK cells and retention of DCs in the administration site.

C. "Allogenic Cancer Cell Based Immunotherapy"

This family of patent filings also relates to methods and compositions for enhancing an immune response. It further describes: (a) making vaccines cells allogeneic by expressing exogenous major histocompatibility complex (MHC) antigens; (b) B cell depletion to augment the effectiveness of the vaccines; and (c) the enhancement of anti-tumor immune responses using multiple immunizations less than two weeks apart.

D. "Cancer Treatment"

This family of patent filings contains results from a phase I clinical trial of human subjects with cancer.

E. "HIV/SIV Vaccines to Generate Mucosal and Systemic Immunity"

This patent family relates to the use of host cells that have been engineered to secrete a heat shock protein (gp96) to treat various chronic viral infections including those caused by HIV.

Government Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, ("FDCA"), and its implementing regulations. Neither HS-110, HS-310, HS-410 or HS-510 nor our future therapeutics, if any, may be marketed in the United States until they received FDA approval. The steps required before a therapeutic, including may be marketed in the United States include:

- preclinical laboratory tests, animal pharmacology and toxicology studies, and formulation studies;
- submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials might begin;

- adequate and well-controlled human clinical trials to establish the safety and efficacy of the therapeutic for each indication;
- submission to the FDA of an NDA;
- FDA review and approval of the NDA; and
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the therapeutic is produced to assess compliance with current good manufacturing practices(GMPs).

Preclinical tests include laboratory evaluation of product chemistry, toxicity, and formulation, as well as animal studies. The conduct of the preclinical tests and formulation of the compounds for testing must comply with federal regulations and requirements. The results of the preclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials might begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. Our Phase I clinical trials for HS-110 began on July 2007 and we have an open IND to begin a Phase II clinical trial. We were formed in 2008. We cannot be sure that submission of any future IND for another therapeutic study will result in the FDA allowing clinical trials to begin.

Clinical trials involve the administration of the investigational drug or therapeutic to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing the objectives of the study, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, although the phases might overlap. The study protocol and informed consent information for study subjects in clinical trials must also be approved by an institutional review board for each institution where the trials will be conducted. Study subjects must sign an informed consent form before participating in a clinical trial.

Phase I usually involves the initial introduction of the investigational drug or therapeutic into humans to evaluate its short-term safety, dosage tolerance, metabolism, pharmacokinetics and pharmacologic actions, and, if possible, to gain an early indication of its effectiveness. Our Phase I study for HS-110 was designed to determine the safety of HS-110 for use in human patients and secondary endpoints included immune response and increased survival. We met our primary endpoint and are in the process of initiating a Phase II clinical trial. Phase II usually involves trials in a limited patient population to:

- evaluate dosage tolerance and appropriate dosage;
- identify possible adverse effects and safety risks; and
- evaluate preliminarily the efficacy of the drug or therapeutic for specific indications.

Phase III trials usually further evaluate clinical efficacy and test further for safety by using the drug or therapeutic in its final form in an expanded patient population. There can be no assurance that Phase I, Phase II, or Phase III testing will be completed successfully within any specified period of time, if at all. Further, clinical trials might be suspended by us or the FDA at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

The FDCA permits the FDA and the IND sponsor to agree in writing on the design and size of clinical studies intended to form the primary basis of an effectiveness claim in an NDA application. This process is known as Special Protocol Assessment, or SPA. These agreements may not be changed after the clinical studies begin, except in limited circumstances.

Assuming successful completion of the required clinical testing, the results of the preclinical studies and of the clinical studies, together with other detailed information, including information on the manufacture and composition of the drug, are submitted to the FDA in the form of an NDA requesting approval to market the product for one or more indications. The testing and approval process requires substantial time, effort, and financial resources. The FDA reviews the application for adequacy. We cannot be sure that any approval will be granted on a timely basis, if at all. The FDA might also refer the application to the appropriate advisory committee, typically a panel of clinicians, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendations of the advisory committee.

The FDA has various programs, including fast track, priority review, and accelerated approval, that are intended to expedite or simplify the process for reviewing drugs, or provide for approval on the basis of surrogate endpoints. Generally, drugs that might be eligible for one or more of these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that provide meaningful benefit over existing treatments. We cannot be sure that, if desired, any of our therapeutics will qualify for any of these programs, or that, if a therapeutic does qualify, that the review time will be reduced.

Section 505(b)(2) of the FDCA allows the FDA to approve a follow-on drug or therapeutic on the basis of data in the scientific literature or data used by FDA in the approval of other drugs. This procedure potentially makes it easier for generic drug manufacturers to obtain rapid approval of new forms of therapeutics based on proprietary data of the original drug manufacturer.

Before approving an NDA, the FDA usually will inspect any facility at which the drug or therapeutic is manufactured, and will not approve the product unless cGMP compliance is satisfactory. If the FDA evaluates the NDA and the manufacturing facilities as acceptable, the FDA might issue an approval letter, or in some cases, an approvable letter followed by an approval letter. An approval letter usually contains a number of conditions that must be met in order to secure final approval of the NDA. When and if those conditions have been met to the FDA's satisfaction, the FDA will issue an approval letter. The approval letter authorizes commercial marketing of the drug or therapeutic for specific indications. As a condition of NDA approval, the FDA might require postmarketing testing and surveillance to monitor the drug's or therapeutics' safety or efficacy, or impose other conditions.

After approval, certain changes to the approved product, such as adding new indications, making certain manufacturing changes, or making certain additional labeling claims, are subject to further FDA review and approval. Before we could market any product for additional indications, we would have to obtain additional approvals from the FDA. Obtaining approval for a new indication generally requires that additional clinical studies be conducted. We cannot be sure that additional approval for new indications, if any, will be approved on a timely basis, or at all.

Post-Approval Requirements

Even after a drug or therapeutic has been approved by the FDA for sale, the FDA might require that certain post-approval requirements be satisfied, including the conduct of additional clinical studies. If such post-approval conditions are not satisfied, the FDA might withdraw its approval of the drug or therapeutic. In addition, holders of an approved NDA are required to:

- report certain adverse reactions to the FDA;
- comply with certain requirements concerning advertising and promotional labeling for their products; and
- continue to have quality control and manufacturing procedures conform to cGMP after approval.

The FDA periodically inspects the sponsor's records related to safety reporting or manufacturing facilities, including an assessment of compliance with cGMP. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. We intend to use third party manufacturers to produce our products in clinical and commercial quantities, and future FDA inspections might identify compliance issues at the facilities of our contract manufacturers that could disrupt production or distribution, or require substantial resources to correct. In addition, discovery of problems with a product after approval might result in restrictions on a product, manufacturer, or holder of an approved NDA, including withdrawal of the product from the market.

Orphan Drug Designations

The FDA may grant orphan drug designation to drugs or therapeutics intended to treat a "rare disease or condition," which generally is a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan drug designation must be requested before submitting an NDA. If the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by the FDA. Orphan drug designation does not convey an advantage in, or shorten the duration of, the review and approval process. If a product that has an orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the FDA might not approve any other applications to market the same drug or therapeutic for the same indication, except in certain very limited circumstances, for a period of seven years. Orphan drug designation does not prevent competitors from developing or marketing different drugs or therapeutics for that indication.

We have not applied for orphan drug designation for HS-110. We may apply for orphan drug designation for HS-310, HS-410 and HS-510 if the results of their respective Phase I clinical trials are positive. We have not established a timeline for such applications.

Subpart H Approval

The FDA may grant marketing approval of a drug or therapeutic under its subpart H regulations. This program makes it possible for a drug or therapeutic candidate for a life-threatening disease to be approved more quickly than the normal application process. Approval is based on a surrogate endpoint or on restrictions to ensure safe usage.

The FDA may grant marketing approval for a new drug or therapeutic on the basis of one or more adequate and well-controlled clinical trials that establish that the drug or therapeutic has an effect on a surrogate endpoint that is reasonably likely, based on epidemiologic, therapeutic, pathophysiologic, or other evidence, to predict clinical benefit or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. Approval is subject to the requirement that the applicant study the drug or therapeutic further, to verify and describe its clinical benefit, where there is uncertainty as to the relation of the surrogate endpoint to clinical benefit, or of the observed clinical benefit to ultimate outcome. Post-marketing studies generally would be studies already underway. When required to be conducted, such studies must also be adequate and well-controlled.

If the FDA concludes that a drug or therapeutic shown to be effective can be safely used only if distribution or use is restricted, it will require such post-marketing restrictions as it deems necessary to assure safe use of the drug or therapeutic product, such as:

- distribution restricted to certain facilities or physicians with special training or experience; or
- distribution conditioned on the performance of specified medical procedures.

The limitations imposed would be commensurate with the specific safety concerns presented by the drug or therapeutic.

Non-U.S. Regulation

Before our products can be marketed outside of the U.S., they are subject to regulatory approval of the respective authorities in the country in which the product should be marketed. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country. No action can be taken to market any product in a country until an appropriate application has been approved by the regulatory authorities in that country. The current approval process varies from country to country, and the time spent in gaining approval varies from that required for FDA approval. In certain countries, the sales price of a product must also be approved. The pricing review period often begins after market approval is granted. Even if a product is approved by a regulatory authority, satisfactory prices might not be approved for such product.

In Europe, marketing authorizations may be submitted at a centralized, a decentralized or national level. The centralized procedure is mandatory for the approval of biotechnology products and provides for the grant of a single marketing authorization that is valid in all European Union member states. As of January 1995, a mutual recognition procedure is available at the request of the applicant for all medicinal products that are not subject to the centralized procedure. There can be no assurance that the chosen regulatory strategy will secure regulatory approvals on a timely basis or at all.

While we intend to market our products outside the United States in compliance with our respective license agreements, we have not made any applications with non-U.S. authorities and have no timeline for such applications or marketing.

Research and Development

We have built an internal and external research and development organization that includes expertise in discovery research, preclinical development, product formulation, analytical and medicinal chemistry, manufacturing, clinical development and regulatory and quality assurance. We engage third parties on a limited basis to conduct portions of our preclinical research; however, we are not substantially dependent upon any third parties for our preclinical research nor do any of these third parties conduct a major portion of our preclinical research. Research and development expenses were $1,246,587, and $562,855, during the years ended December 31, 2011 and 2010, respectively. For the nine months ended September 30, 2012, we spent $591,395 on research and development.

Employees

As of February 1, 2013, we had a total of 12 employees and consultants, of which 6 are full-time employees and 6 are part-time employees or consultants. We believe our relationships with our employees are satisfactory. None of our employees is represented by a labor union. We anticipate that we will need to identify, attract, train and retain other highly skilled personnel to pursue our development program. Hiring for such personnel is competitive, and there can be no assurance that we will be able to retain our key employees or attract, assimilate or retain the qualified personnel necessary for the development of our business.

Facilities

We lease approximately 2,111 square feet of office space in Chapel Hill, North Carolina under a lease that expires December 31, 2012, which may be extended for an additional 24 months on substantially the same terms. On December 19, 2012, we entered into a lease modification agreement that extended the lease term until July 31, 2013 and the monthly rent was increased to $4,046. The monthly lease payments for these facilities, including common area maintenance and related operating expenses, are approximately $3,870.

Legal Proceedings

There are currently no pending legal proceedings against the company or its subsidiaries.

MANAGEMENT AND BOARD OF DIRECTORS

Board of Directors

Our business and affairs are organized under the direction of our Board of Directors, which currently consists of five members. Our Board of Directors is divided into three classes with each class serving a staggered three-year term. The primary responsibilities of our Board of Directors are to provide oversight, strategic guidance, counseling and direction to our management. Our Board of Directors meets on a regular basis and additionally as required.

Executive Officers and Board of Directors

Name	Age	Position
Jeffrey Wolf	49	Chairman, Chief Executive Officer, Chief Financial Officer and Director
Sandra Silberman, MD, Ph.D.	57	Chief Medical Advisor
Jennifer Harris, Pharm.D.	47	Senior Director of Clinical Development
Vadim Deyev, MD, Ph.D.	48	Director of Applied Research
John Monahan, Ph.D.	66	Director
Paul Belsky, MD	54	Director
Michael Kharitonov, Ph.D.	49	Director
Edward B. Smith	37	Director

All of the officers listed above are full-time employees of the Company other than Dr. Silberman who works on a part-time basis.

Jeffrey Wolf, ***Chairman, Chief Executive Officer, Chief Financial Officer and Director***

Mr. Wolf founded Heat Biologics in August, 2008. Prior to founding Heat, from June 1997 to present, Mr. Wolf has served as managing director at Seed-One Ventures, LLC a medically-focused venture capital firm. Mr. Wolf is presently a managing director at Seed-One Ventures. Since founding Seed-One, Mr. Wolf has founded and run several medical companies. Mr. Wolf's start-ups include Avigen, a San Francisco-based gene therapy company where he was a co-founder and director; TyRx Pharma, a Princeton-based company focused on the development of bio-compatible polymers where he was a co-founder and Chairman; EluSys Therapeutics, a New Jersey company focused on the development of a novel technology to remove blood-borne pathogens where he was a co-founder, Chairman and Chief Executive Officer; and GenerationOne, a Miami-based company focused on mobile-based collaborative care, where he was the founder, Chairman and Chief Executive Officer. Mr. Wolf received his M.B.A. from Stanford Business School, his J.D. from New York University School of Law and his B.A. from the University of Chicago, where he graduated with honors in Economics. Mr. Wolf serves as a director and/or officer of several Seed-One portfolio companies and serves as a director of Synthetic Biologics, Inc., a biotechnology company focused on the development of synthetic DNA-based therapeutics and innovative disease-modifying medicines for serious illnesses.

Mr. Wolf has been associated with the Company since inception and brings to the Board extensive knowledge of the pharmaceutical and biotechnology industries. Having served in senior corporate positions in several biomedical companies, he has a vast knowledge of the industry and brings to the Board significant executive leadership and operational experience. His business experience provides him with a broad understanding of the operational, financial and strategic issues facing public companies and his service on other public company boards provides him with extensive corporate governance knowledge.

Sandra Silberman, MD, Ph.D., ***Chief Medical Advisor***

Dr. Silberman began her career in clinical development at Pfizer, Inc., where from 1992-1999 she initiated the company's first program in clinical oncology and oversaw the introduction of Tarceva™ into clinical trials. From 2000-2004, she served as Senior Director for Novartis Clinical Research, where she led the global development of Gleevec(TM), a highly innovative drug and the first targeted therapy for chronic myelogenous leukemia.

Dr. Silberman then joined Eisai Medical Research as Global Therapeutic Area Head (Oncology) in 2004 until 2006, a role in which she advanced six novel compounds into Phases I through III of clinical development. From 2009 until 2013, Dr. Silberman has served as Vice-President of Quintiles.

Dr. Silberman received her Ph.D. in Tumor Immunology from Johns Hopkins University and her M.D. from Cornell University Medical College. She completed a fellowship in hematology/oncology at the Brigham & Women's and the Dana Farber Cancer Institute in Boston. She has numerous publications and is named on several patents in the cancer drug development field, including novel anti-tubulin agents for advanced solid tumors. She is board certified in Internal Medicine and Hematology.

Jennifer Harris, Pharm.D, ***Vice President of Clinical Development***

Dr. Harris is responsible for coordinating the clinical development and operational efforts at Heat Biologics. Dr. Harris has over 20 years of oncology-focused clinical trial experience within the pharmaceutical and biotechnology industries and academic clinical research settings. In 2010 until joining Heat Biologics in 2011, she served as a Medical Science Liaison for Dendreon Corporation, where she was instrumental in coordinating Phase IV clinical trials of sipuleucel-T (Provenge), the first approved autologous cellular immune therapy to treat prostate cancer. From 2009-2010 while at Novaquest, Dr. Harris lead international, multi-disciplinary teams providing operational trial oversight for early-stage compounds, including protocol development, study report preparation, investigator brochure preparation, regulatory submissions, recruitment of investigator sites, and establishment of clinical trial budgets. From 2006-2008, Dr. Harris was Medical Science Liaison at Celgene Corporation, where she helped conduct multiple clinical trials. She has worked on over 20 IND programs from Phase I-III, as well as several NDAs.

Dr. Harris received her B.S. and Pharm.D. from the University of North Carolina at Chapel Hill. She has also written multiple clinical publications and meeting abstracts.

Vadim V. Deyev, M.D., Ph.D., ***Director of Applied Research***

Dr. Deyev joined Heat Biologics in January 2009 as Director of Applied Research. Prior to joining Heat Biologics, Dr. Deyev worked from 2006-2008 as Associate Scientist of Microbiology and Immunology and Hybridoma and Fusion Protein Core Director at the University of Miami School of Medicine. Working with Dr. Eckhard Podack, Heat Biologics' Scientific Advisor and Chairman of its Scientific Advisory Board, Dr. Deyev has made major contributions to the development of technologies later licensed by the Company. Since 2001, Dr. Deyev has authored numerous publications on immunology and oncology based upon his work with Dr. Podack at the University of Miami. Dr. Deyev joined the team at University of Miami in 1996 until present, after leading the Immunopharmacology Group at the Cancer Research Center in Moscow, Russia Dr. Deyev received his Ph.D. in Immunology/Oncology from Cancer Research Center in Moscow, Russia and his M.D. from Russian State Medical University.

John Monahan, Ph.D., ***Director***

Dr. Monahan is currently the Chief Technology Officer of Synthetic Biologics, Inc., a biotechnology company focused on the development of synthetic DNA-based therapeutics and innovative disease-modifying medicines for serious illnesses. Dr. Monahan Co-Founded Avigen Inc. (NASDAQ:AVGN) in 1992, a company which has become a leader in its sector for the development of novel pharmaceutical products for the treatment of serious human diseases. Over a 12 year period as CEO of Avigen he raised over $235M in several private and public financings including its IPO. From 1989-1992, he was VP of R&D at Somatix Therapy Corp., Alameda, CA and from 1985-1989 he was Director of Molecular & Cell Biology at Triton Biosciences Inc., Alameda, CA. Prior to that from 1982-1985, he was Research Group Chief, Department of Molecular Genetics, Hoffmann-LaRoche, Inc. Nutley, NJ, and from 1975 to 1977 he was an Instructor at Baylor College of Medicine, Houston TX. He received his Ph.D. in Biochemistry in 1974 from McMaster University, Canada and his B.Sc. from University College Dublin, Ireland in 1969. Dr Monahan is a board member of Tacere Therapeutics, CA. He is also a board member of a number of Irish biotech companies including Genable, Cellix, Luxcel, Identigen, Pharmatrin and GK Technologies.

Dr. Monahan brings to the Board extensive knowledge of the pharmaceutical and biologics industry. Having served in senior corporate positions in many medical companies he has a vast knowledge of the industry.

Paul Belsky, M.D., *Director*

Dr. Belsky has served on Heat's Board of Directors since November 2009. Dr. Belsky is currently a medical and scientific advisor at Seed-One Ventures and has been a partner at Concord Medical Group, LLC since June of 1998. Dr. Belsky served as a scientific advisor to Elusys Therapeutics, Sensatex, GenerationOne and TyRx Pharma. Dr. Belsky has extensive expertise in the clinical practice of internal medicine and cardiovascular diseases, and was formerly on the clinical academic faculty at Weill College of Medicine, Cornell University. He is a fellow of the American College of Cardiology and the American College of Chest Physicians, is a member of the American College of Physicians, and a Clinical Assistant Professor of Medicine at New York University School of Medicine. Dr. Belsky received his MD from the University of California at San Francisco, and his AB in Biology from Brown University, where he was elected Phi Beta Kappa.

Dr Belsky brings to the Board extensive knowledge of the medical industry. His medical background aids in the understanding of the detailed science behind our intellectual property.

Michael Kharitonov, Ph.D., *Director*

Dr. Kharitonov has been the Chief Executive Officer of Voleon Capital Management, an investment management firm, since July 2007 until present. He is a high technology entrepreneur and computer scientist whose areas of expertise include advanced computer and communication technologies and quantitative finance. Dr. Kharitonov is a founder and CEO of Voleon Capital Management LLC. Dr. Kharitonov was a co-founder and former Chairman and CEO of Netli, Inc., a successful Silicon Valley startup that pioneered the development of Application Delivery Networks. Under Dr. Kharitonov's leadership Netli raised over $20 million in venture financing from a number of Silicon Valley's best known venture capital firms. In 2007 Netli was acquired by Akamai Technologies (NASDAQ: AKAM). Dr. Kharitonov also served as a Vice President of D. E. Shaw and Co., an international investment firm known as one of the most quantitatively advanced and computerized securities trading firms in the world. Dr. Kharitonov holds a Ph.D. degree from the Department of Computer Science at Stanford University. At Stanford he was awarded a Hertz Fellowship and was a winner of several scholarly awards. He also holds a B.A. in Computer Science and Mathematics with highest honors from University of California at Berkeley.

Dr Kharitonov brings a strong start-up and finance background to the Company, and adds significant strategic, business and financial experience. His prior successful management experience and fundraisings provides him with a broad understanding issues faced by growing companies and of the financial markets and the financing opportunities available to us.

Edward B. Smith, *Director*

Since April 2005, Mr. Smith has been the Managing Partner of Brightline Capital Management, LLC ("BCM"), a New York-based investment firm founded in 2005. BCM is the investment manager of Brightline Ventures I, LLC, Brightline Ventures II, LLC, Brightline Ventures III, LLC and Brightline Capital Partners, LP. Prior to founding BCM, Mr. Smith worked at Gracie Capital from 2004-2005, GTCR Golder Rauner from 1999-2001 and Credit Suisse First Boston from 1997-1999. Mr. Smith holds a Bachelor of Arts in Social Studies from Harvard College and a Masters in Business Administration from Harvard Business School. He is currently a Director of Z Trim Holdings Inc (OTC:ZTHO), a manufacturer of environmentally friendly agricultural functional ingredients.

Mr. Smith brings a strong business background to the Company, and adds significant strategic, business and financial experience. Mr. Smith's business background provides him with a broad understanding of the issues facing us, the financial markets and the financing opportunities available to us. His service on other public company boards provides him with extensive corporate governance knowledge and insight into issues faced by companies similar to ours.

Scientific Advisory Board

In addition to our Board of Directors we also have a scientific advisory board comprised of six individuals. The Scientific Advisory Board is responsible for providing scientific advice and for assessing the scientific progress of our research and development efforts. We have entered into written agreements and confidentiality agreements with all of our members of our Scientific Advisory Board. The members of our Scientific Advisory Board are compensated for their services. Drs. Allison, Stebbing and Nemunaitis are each entitled to receive $1,500 per board meeting in addition to a reimbursement for travel and related. In addition, Drs. Allison, Stebbing and Von Hoff each received options to purchase 15,000 shares of our Common Stock, which options vest over a four year period. Dr. Von Hoff is entitled to receive $4,000 per onsite advisory board meeting, $2,000 per telephonic meeting and an hourly rate of $500 per hour for consultative discussions with management. Dr. Podack receives consulting fees equal to $3,125 per month subject to increase to $4,167 per month.

Eckhard Podack, M.D., Ph.D.,*Scientific Advisor and Chairman, Scientific Advisory Board*

Dr. Podack, the inventor of the Company's technology, serves as Chairman of its Scientific Advisory Board. Dr. Podack received his medical degree from the Johan Wolfgang Goethe University in Frankfurt in 1968 and his Medical License in 1970. Following service in the German Army as Captain and Battalion Physician, he completed his Ph.D. in the field of Biochemistry at the Georg August University in Gottingen. From 1974-1984 he studied Immunology at the Scripps Clinic and Research Foundation in La Jolla CA where he received an Established Investigatorship from the American Heart Association. Dr. Podack is the discoverer of Perforin and well recognized as the "Father" of the field of core forming proteins. Dr. Podack is the Sylvester Distinguished Professor of Microbiology & Immunology and Medicine and Chairman of the Department of Microbiology at the University of Miami, Miller School of Medicine.

James Allison, Ph.D.,*Scientific Advisor*

Dr. Allison is a leader in the field of immunology, particularly in developing ways to help the immune system recognize and destroy cancer cells. His research is focused on the mechanisms that regulate the immunological response of T lymphocytes, especially strategies to manipulate those responses in clinically relevant areas, including autoimmunity, allergies, vaccinations, and tumor therapy. Dr. Allison is Chairman of the Immunology Program, Director of the Ludwig Center for Cancer Immunotherapy, Attending Immunologist, and David H. Koch Chair in Immunologic Studies at Memorial Sloan-Kettering Cancer Center in New York City.

Sol Barer, Ph.D.,*Scientific Advisor*

Dr. Barer is the former Chairman and Chief Executive Officer of Celgene Corp., a global biopharmaceutical company engaged in the discovery, development, and commercialization of novel therapies for the treatment of cancer and inflammatory diseases. Dr. Barer has spent the last 20 years with Celgene and its predecessor, Celanese Research Company, serving as President, COO, CEO, Senior Vice President of Science and Technology, and Vice President/General Manager of the Chiral Products Division. Dr. Barer received his B.S. from Brooklyn College and his Ph.D. in organic chemistry from Rutgers University.

John Nemunaitis, M.D.,*Scientific Advisor*

Dr. Nemunaitis is an oncologist and Executive Medical Director of the Mary Crowley Cancer Research Centers (MCCRC) and has been exploring novel targeted therapies for treating cancer patients for over 20 years. Dr. Nemunaitis received his B.A. and M.D. degrees from Case Western Reserve University. He completed his residency at Boston City Hospital and then performed his Hematology and Oncology fellowship at the University of Washington and the Fred Hutchinson Cancer Research Center in Seattle from 1988 to 1993. Dr. Nemunaitis came

to Dallas in 1993 to establish the clinical research program for Texas Oncology Physicians Association (TOPA). He later established a not-for-profit translational research program (the MCCRC). He is a committee member of the Western Institutional Review Board (WIRB) and recently co-founded a molecular therapeutic/vaccine biotechnology company with GMP manufacturing capacity called Gradalis, Inc. Dr. Nemunaitis has authored over 250 peer-reviewed publications and 36 book chapters. He has instituted study establishment of over 350 trials, overseen FDA sponsored experimental treatment of nearly 4,000 cancer patients at MCCRC, and has carried out 14 government regulatory (FDA, RAC) presentations for biotechnology product development. He is also developer and holder of 8 new molecular and vaccine Investigational New Drug Applications (IND's). His research focus is clinical in orientation and involves determination of molecular signals in order to optimize targeted therapy, development of RNAi based therapeutics, and cancer vaccine approaches.

Justin Stebbing, M.D. MA FRCP FRCPath PhD, ***Scientific Advisor***

Dr. Stebbing is a member of the Royal College of Physicians, American Board of Internal Medicine and a Fellow of the Royal College of Pathologists. Originally, Justin trained in medicine at Trinity College Oxford, obtaining a triple first class degree. After completion of junior doctor posts in Oxford, he undertook a residency (junior doctor) training at The Johns Hopkins Hospital in the US, before returning to London to continue his training in oncology at The Royal Marsden. Justin then undertook a PhD, funded by the Medical Research Council, investigating the interplay between the immune system and cancer. Specifically, the role of heat shock proteins in viral infections and tumorigenesis were examined helping in the development of vaccines that are currently in clinical trials. Dr. Stebbing has published over 300 peer-reviewed papers in journals such as the Lancet, New England Journal, Blood, PNAS, The Journal of Clinical Oncology and Annals of Internal Medicine, the majority as first or last author, as well as over 100 book chapters. His publications mainly focus on early and late stage trials of new drugs, mechanisms of disease, and prognostic indicators. He is on the scientific advisory board of a number of biotechnology companies and the editorial board of a number of world-leading journals such as the Journal of Clinical Oncology. He is now a senior lecturer at Imperial College, London.

Daniel D. Von Hoff, M.D., ***Scientific Advisor***

Daniel D. Von Hoff, M.D., is currently Physician in Chief and Director of Translational Research at TGen (Translational Genomics Research Institute) in Phoenix, Arizona. He is also Chief Scientific Officer for Scottsdale Healthcare's Clinical Research Institute and Scientific Medical Officer for US Oncology. He holds an appointment as Clinical Professor of Medicine, University of Arizona, College of Medicine. Dr. Von Hoff's major interest is in the development of new anti-cancer agents, both in the clinic and in the laboratory. He and his colleagues were involved in the beginning of the development of many of the agents that are now used routinely, including: mitoxantrone, fludarabine, paclitaxel, docetaxel, gemcitabine, irinotecan, nelarabine, capecitabine, lapatinib and others. At present, he and his colleagues are concentrating on the development of molecularly targeted therapies particularly for patients with advanced pancreatic cancer. Dr. Von Hoff has published more than 559 papers, 134 book chapters and over 1,000 abstracts.

Dr. Von Hoff served as an appointee to President Bush's National Cancer Advisory Board from June 2004 to March 2010. Dr. Von Hoff is the past President of the American Association for Cancer Research (the world's largest cancer research organization), a Fellow of the American College of Physicians, and a member and past board member of the American Society of Clinical Oncology. He is a founder of ILEX™ Oncology, Inc. (acquired by Genzyme after Ilex had 2 agents, alemtuzumab and clofarabine approved for patients with leukemia). He is founder and the Editor Emeritus of Investigational New Drugs – The Journal of New Anticancer Agents; and, Editor-in-Chief of Molecular Cancer Therapeutics. He is also proud to have been a mentor and teacher for multiple medical students, medical oncology fellows, graduate students, and post-doctoral fellows. He is a co-founder of the AACR/ASCO Methods in Clinical Cancer Research Workshop. Dr. Von Hoff currently serves as Physician in Chief for the Translational Genomics Research Institute (TGen) in Phoenix, Arizona and Chief Scientific Officer of Scottsdale Healthcare and US Oncology. Dr. Von Hoff received his MD degree from Columbia University.

Classified Board

Our articles of incorporation provide for a classified Board of Directors consisting of three classes of directors, each serving staggered three-year terms, as follows:

- Class I, consists of Edward Smith, and whose term will expire at our annual meeting of shareholders to be held in 2013;
- Class II, consists of Paul Belsky and John Monahan, and whose term will expire at our annual meeting of shareholders to be held in 2014; and
- Class III, consists of Michael Kharitonov and Jeff Wolf, and whose term expires at our annual meeting of shareholders to be held in 2015.

At each annual shareholders meeting to be held after the initial classification, the successors to directors whose terms then expire will serve until the third annual meeting following their election and until their successors are duly elected and qualified.

Our by-laws provide that the number of directors that constitute our whole Board of Directors shall be determined from time to time by resolution of the Board of Directors. In November 2010, our Board of Directors determined that the number of directors constituting the Board shall be six. Our Board is currently comprised of five board members, leaving one vacancy. The authorized number of directors may be changed only by resolution of the Board of Directors. Any additional directorships resulting from an increase in the number of directors will be distributed between the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of the Board of Directors may have the effect of delaying or preventing changes in our control or management.

There are no family relationships among any of our directors or executive officers. We have determined that Messrs. Monahan, Kharitonov and Belsky are independent in accordance with the definition of independence established by NASDAQ.

Committees of the Board of Directors

We currently have a compensation committee comprised of John Monahan and Michael Kharitonov, each of whom is deemed to be independent in accordance with the NASDAQ definition of independence.

2012 Director Compensation

Compensation of Directors

The following table sets forth information for the fiscal year ended December 31, 2012 regarding the compensation of our directors who at December 31, 2012 were not also named executive officers.

Name	Fees Earned or Paid in Cash	Option Awards(1)	Other Compensation	Total
Paul Belsky, MD	$ —	$ 1,600	$ —	$ 1,600
Michael Kharitonov, Ph.D.	$ —	$ 2,134	$ —	$ 2,134
John Monahan, Ph.D.	$ —	$ 2,134	$ —	$ 2,134
Edward Smith	$ —	$ 1,600	$ —	$ 1,600

(1) The amounts in the "Option Awards" column reflect the dollar amounts recognized as compensation expense for the financial statement reporting purposes for stock options for the fiscal year ended December 31, 2012 in accordance with SFAS 123(R). The fair value of the options was determined using the Black-Scholes model.

EXECUTIVE COMPENSATION

Set forth below is the compensation that was paid to all executive officers during the years ended December 31, 2012 and December 31, 2011 that exceeded $100,000.

Summary Compensation Table

Position	Year	Salary	Bonus	Options	Other (1)	Total
Jeffrey Wolf	2012	$ 250,000	$ 58,333	$ 11,492	$ 11,156	$ 330,981
Chairman & CEO	2011	$ 98,147	$ —	$ 22,984	$ 11,370	$ 132,501

(1) Represents payment for health insurance

Outstanding Equity Awards At Fiscal Year-End (December 31, 2012)

Name and Principal Position	Number of securities underlying unexercised options/ exercisable	Number of securities underlying unexercised options/un-exercisable	Option exercise price	Option expiration date
Jeffrey Wolf, Chairman of the Board,	25,219	—	$ 1.00	12/17/2019
Chief Executive Officer	250,000	—	$ 0.31	4/7/2016

Note: We use the Black-Scholes option-pricing model to value all options issued by the Company.

Employment Agreements

On December 18, 2009, we entered into an employment agreement with Jeffrey Wolf to act as our Chief Executive Officer, which was amended on November 22, 2011. Mr. Wolf receives an annual base salary of $250,000 per year. In addition, Mr. Wolf was entitled to receive an annual bonus of at least $25,000 after his first year of service, $50,000 after his second year of service and $75,000 after his third year of service. He also may receive, at the sole discretion of the Board, additional performance-based bonuses. Upon execution of the agreement, Mr. Wolf was issued options exercisable for 25,219 shares of our Common Stock. In addition, he is to receive certain options to purchase 2% of our fully diluted equity at an exercise price equal to the then current market price if our stock is traded on a national exchange and our market capitalization is at least $250 million for at least 5 days.

If Mr. Wolf's employment contract is terminated for death or disability (as defined in the agreement), he (or his estate in the event of death) will receive six month's severance. If Mr. Wolf's employment is terminated by us other than for cause, he will receive twelve months severance. In addition, if Mr. Wolf's employment is terminated by us other than for cause all Restricted Shares, Common Stock and options to purchase Common Stock that would have vested shall immediately vest. Mr. Wolf will not be entitled to any additional severance in the event he is terminated for cause or voluntarily resigns. The agreement also contains non- competition and other similar provisions. Under his employment agreement, Mr. Wolf has also agreed to non-competition provisions.

On June 10, 2008, Mr. Wolf purchased 600,000 shares of our Common Stock, at a purchase price of $0.0001 per share. Seed-One Holdings VI, LLC and Safeway Medical, LLC, investment funds of which Mr. Wolf is a managing member also purchased 1,509,781 and 1,000,000 shares of our Common Stock, respectively, on June 10, 2008 at a purchase price of $0.0001 per share.

DESCRIPTION OF OUR SECURITIES

General

The following is a summary of the rights of our Common Stock and Preferred Stock and related provisions of our articles of incorporation and bylaws. For more detailed information, please see our articles of incorporation and bylaws.

We are authorized to issue 50,000,000 shares of Common Stock, par value $.0001 per share, of which 4,221,448 shares are outstanding and 2,112,500 shares of Preferred Stock, par value $.0001 per share, of which 112,500 shares are designated Series 1 Preferred and are outstanding and are currently convertible into 114,908 shares of Common Stock and 2,000,000 are designated Series A Preferred and 1,863,128 shares are outstanding as of November 30, 2012.

Common Stock

The holders of our Common Stock are entitled to one vote per share on all matters to be voted on by the shareholders. Subject to preferences that may be applicable to any outstanding shares of Preferred Stock, holders of Common Stock are entitled to receive ratably such dividends as may be declared by the Board of Directors out of funds legally available therefor. If we liquidate, dissolve or wind up, holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of Common Stock have no preemptive, conversion or subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. All outstanding shares of Common Stock are, and all shares of Common Stock to be outstanding upon completion of this Offering will be, fully paid and nonassessable.

Preferred Stock

Series 1 and Series A

Our Board of Directors has the authority, without further action by the shareholders, to issue from time to time the Preferred Stock that remains unissued, all of which has been designated as either Series 1 Preferred Stock or Series A Preferred Stock, which has rights, preferences, privileges and restrictions which are greater than or senior to the rights of the Common Stock. The issuance of preferred stock could adversely affect the voting power of holders of Common Stock and reduce the likelihood that such holders will receive dividend payments and payments upon liquidation. Such issuance could have the effect of decreasing the market price of the Common Stock. The issuance of Preferred Stock or even the ability to issue Preferred Stock could have the effect of delaying, deterring or preventing a change in control.

Of the 2,112,500 shares of authorized Preferred Stock, 112,500 shares are designated as Series 1 Preferred Stock all of which are issued and outstanding as of November 30, 2012 and as of the date of this Offering and 2,000,000 shares are designated as Series A Preferred Stock of which 1,863,128 shares are issued and outstanding as of November 30, 2012 and as of the date of this Offering.

Automatic Conversion

Upon the closing of this Offering all applicable outstanding shares of Preferred Stock automatically convert to Common Stock and such shares may not be reissued.

If 2/3 of the Series A Preferred Stock holders (including one of the larger investors so long as they hold 40% of the Series A Preferred) vote in favor of a conversion then the Series A will automatically convert to Common Stock. If 2/3 of the Series 1 Preferred Stock holders vote in favor of a conversion then the Series 1 will automatically convert to Common Stock. However if we do not raise $10,000,000 in this Offering, or the holders of shares do not vote in favor of conversion, then the Series 1 and Series A Preferred Stock will not automatically convert to Common Stock and will remain outstanding.

Dividends

The Series 1 and Series A Preferred Stock have a priority with respect to dividend distributions and distributions upon liquidation. The Series 1 and Series A Preferred Stock are entitled to receive on a *pari passu* basis, prior to the common shareholders receiving dividends, a dividend in an amount at least equal to (i) in the case of a dividend on stock convertible into Common Stock, the product of the (x) dividend payable on each share of such shares or class determined as if all shares or classes converted to Common Stock and (y) number of shares into which such Preferred Stock is convertible or (ii) in the case of a dividend on a class not convertible to Common Stock, the number resulting by dividing the amount of dividend payable on each class or share by the original issue price of such class and multiplying that by the Original Issue Price of the Series 1 and Series A Preferred Stock which is $2.35 for the Series 1 Preferred and $2.10 for the Series A Preferred.

Liquidation

In the event of a liquidation, the holders of the Series A Preferred are entitled to receive before any payment to the Common Stock holder and *pari passu* with the holders of the Series 1 Preferred an amount per share equal to the greater of (i) $2.10 plus any dividends declared but unpaid or (ii) such amount as would have been paid had all the Preferred Stock been converted to common immediately before the liquidation. In the event of a liquidation, the holders of the Series 1 Preferred are entitled to receive before any payment to the Common Stock holder and *pari passu* with any distribution to the Series A Preferred an amount per share equal to the greater of (i) $2.35 plus any dividends declared but unpaid or (ii) such amount as would have been paid had all the Preferred Stock been converted to common immediately before the liquidation.

Voting Rights

Each holder of Preferred Stock is entitled to vote on all matters stockholders are entitled to vote and to cast the number of votes as shall equal the whole number of shares of Common Stock into which their shares of Preferred Stock are convertible. The Amended and Restated Stockholders Agreement provides that the holders of the Series A Preferred are entitled to elect one director exclusively as a separate class and the holders of Series 1 Preferred are entitled to elect one director exclusively as a separate class, the holders of the Common Stock are entitled to elect one director exclusively as a separate class, the holders of a majority of shares of the Series 1 Preferred Stock and a majority of the shares of the Common Stock, each voting as a separate class shall elect 2 directors and the holders of a majority of the shares of Common Stock and Preferred Stock voting together as on single class on an as converted basis shall be entitled to elect one director.

Protective Provisions

The Second Amended and Restated Articles of Incorporation provide that at any time the Preferred Stock or Common Stock are outstanding the following actions cannot be taken without the consent of at least a majority of the Series A Preferred Stock, at least a majority of the Series 1 Preferred Stock and at least a majority of the Common Stock:

(i) amend, alter or repeal any provisions of the Second Amended and Restated Articles of Incorporation or bylaws;
(ii) create, or issue any additional classes of capital stock unless the same ranks junior to the Series A Preferred Stock in terms of dividends and liquidation or increase the number of authorized shares of the Series A Preferred Stock or any other class of stock unless it ranks junior to the Series A Preferred Stock in terms of dividends and liquidation;
(iii) reclassify, alter or amend any existing security that is *pari passu* with the Series A Preferred Stock in terms of dividends or liquidation if such reclassification would render it senior to the Series A Preferred Stock or reclassify any stock junior to the Series A Preferred Stock in terms of dividends or distributions if such reclassification would render it senior to or *pari passu* with the Series A Preferred Stock;
(iv) purchase or redeem or pay or declare any dividend or make any distribution on shares as approved by the Board of Directors, repurchases of former employees, officers or directors or consultant, dividends payable solely in the form of additional shares of stock;
(v) Take any action to dissolve or otherwise liquidate the Company; or

(vi) Sell all or substantially all of our assets or effect a merger or consolidation unless the Series A Preferred would receive three (3) times their initial investment.

Each holder of Preferred Stock has a right to convert each share of its stock into one share of Common Stock; however such number is adjusted in certain cases including if we issue convertible securities at a price lower than that paid by the Preferred Stock holders.

The Amended and Restated Stockholders Agreement

On May 10, 2010, we entered into an Amended and Restated Stockholders Agreement (the "Amended and Restated Stockholders Agreement") with each Series A Preferred Stockholder, each Series 1 Preferred Stockholder and all Common Stock holders of the Company on such date whereby each party agreed to vote their shares for certain board members and each was awarded pre-emptive rights. The Amended and Restated Stockholders Agreement will terminate upon the closing date of an underwritten public offering of our Common Stock or other equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended. .

Warrants/Options

Warrants

In March 2011, we granted warrants exercisable for an aggregate of 75,000 shares of our Common Stock to 5 individuals for services rendered in connection with a placement agency agreement we had with Paramount BioCapital, a company no longer in existence. The warrants are exercisable at $0.21 per share, vest immediately upon exercise and expire on March 21, 2021.

In December 2011, we issued a warrant exercisable for 29,762 shares of our Series A Preferred Stock to the North Carolina Biotechnology Center in connection with a loan. The warrant is exercisable for a period of ten years at a price per share of $2.10, contains a cashless exercise feature and contains a weighted average price adjustment feature.

In August 2012, we issued a warrant exercisable for 17,500 shares of our Series A Preferred Stock to Square 1 Bank in connection with our loan from them. The warrant is exercisable for a period of ten years at a price per share of $2.10, contains a cashless exercise feature and contains a weighted average price adjustment feature. With respect to any offering conducted at least twelve months after this offering, the holder of the warrant is entitled to piggyback registration rights with respect to the underlying shares.

Stock Incentive Plan

Pursuant to the terms of our Second Amended Stock Option Plan, we are authorized to grant up to 1,700,000 awards in the form of options, restricted stock, restricted stock units and other stock based awards exercisable to officers, directors, employees and consultants. As of November 30, 2012, we have issued under our Plan options exercisable for 1,414,564 shares of Common Stock and 229,781 shares of restricted stock, to a total of 25 individuals for services rendered. Of such amount as of November 30, 2012, 1,018,359 options had vested and were exercisable, 396,205 options will vest subsequent to November 30, 2012 and all of the restrictions on the restricted stock will have lapsed in April of 2013.

In 2009, we issued options for an aggregate of 150,219 shares of our Common Stock to 5 individuals. As of November 30, 2012, 69,698 of such options had vested, 521 will vest in December 2012 and 80,000 had been terminated. Of the remaining vested options exercisable, 45,219 have an exercise price of $1.00 and expire in 2019 and 24,479 have an exercise price of $0.0001 and expire in 2019.

In 2010, we issued options exercisable for an aggregate of 180,000 shares of our Common Stock at an exercise price of $0.21 per share that expire in 2020 to 10 individuals. As of November 30, 2012, 150,000 of such options had vested. The remaining unvested shares of 30,000 will vest by September 2014.

In 2011, we issued options for an aggregate of 768,250 shares of Common Stock, of which 15,000 shares had terminated resulting in 753,250 options exercisable as of November 30, 2012. As of November 30, 2012, 561,670 shares of such options vested and were exercisable (of which 318,615 shares of Common Stock at an exercise price of $0.28 per share that mature in 2020 and 2021 were issued to 11 individuals and options exercisable for an aggregate of 243,055 shares of our Common Stock at an exercise price of $0.31 per share that mature in 2019 were issued to one individual). The remaining unvested options of 191,580 will vest at various periods over the next three years at exercise prices ranging from $0.28 to $0.31 per share.

In 2012, we issued options exercisable for an aggregate of 411,095 shares of our Common Stock at an average exercise price of $0.33 per share that mature in 2022 to 6 individuals and 2 entities. As of November 30, 2012, 236,991 of such options vested and were exercisable. The remaining unvested shares of 174,104 will vest at various periods over the next four years.

Convertible Notes

In September 2011, convertible notes in the principal amount of $2,623,709 were converted into shares of Series A Preferred stock, of which notes in the principal amount of $2,273,709 were issued to an investor the managing member of which is Mr. Smith, a member of our Board of Directors. Of such notes, three convertible promissory notes in the aggregate principal amount of $1,447,709 were issued in 2011 to two different note holders and the remaining notes in the aggregate principal amount of $1,176,000 were issued to two investors in 2010. The notes accrued interest at a rate of 3% per annum and were scheduled to mature 18 months after issuance.

In October 2011, in connection with our manufacturing service agreement, we issued a convertible promissory note to our manufacturer, of which $197,099 was outstanding as of December 31, 2012. The manufacturing services agreement allows us to make up to $950,000 of payments for services rendered by such vendor through the issuance of a convertible note. The note accrues interest at a rate of 12% per annum and is convertible into Common or Preferred Stock upon a financing raise of at least $7,500,000. Unless earlier converted, the note is payable on demand after its eighth anniversary date of issue. Unpaid invoices under the manufacturing agreement are treated as advances under the note. If we raise at least $4,200,000 but less than $7,500,000 the note holder has a right to demand repayment at such time of 50% of the outstanding balance under the loan.

In December 2011, we entered into a loan agreement with the North Carolina Biotechnology Center for an amount up to $250,000. The note evidencing the loan matures on December 13, 2014 and bears interest at a rate of 4.25%. The principal is payable in annual installments in the amount of 5% of the outstanding principal commencing on the one year anniversary of the loan and each one year anniversary thereafter. As of August 31 2012, we had repaid all amounts outstanding under the loan.

In August 2012, we entered into a secured loan with Square 1 Bank, the proceeds of which were used in part to pay off the loan from North Carolina Biotechnology Center. The Square 1 Loan and Security Agreement provides that the Square 1 Bank will provide us with a term loan in the aggregate principal amount not to exceed $1,000,000 to be used for working capital and capital expenditures (the "Tranche A Loan"). The Tranche A Loan will be available to us until August 7, 2013. The Tranche A Loan is payable as interest until August 7, 2013 and then is payable in 36 monthly installments of principal and accrued interest The Tranche A Loan matures on August 7, 2016. If we receive a grant that provides aggregate funds with a value of $16,000,000, the maximum Tranche A Loan amount increases to $2,775,000. If we receive $5,000,000 or more from the sale of our equity to investors, the Square 1 Agreement also provides that twelve months after we receive such funds we can borrow an additional term loan in the aggregate principal amount not to exceed $1,000,000 to be used for working capital and capital expenditures (the "Tranche B Loan"). The Tranche B Loan matures on December 14, 2014. The Bank also made one term loan in the amount of $225,000 which we used to repay our debt to North Carolina Biotechnology Center (the "Term B Loan"). The Term B Loan matures December 14, 2014 and requires payments on the one and two year anniversary of the date of issuance equal to five percent of the principal amount of the loan plus accrued interest, with the balance of the loan being paid on maturity. Once repaid the loans may not be re-borrowed. The loans are secured by a lien on substantially all of our assets, including our stock in our subsidiaries but excluding our intellectual property. As of December 31, 2012, we had borrowed $725,000 under the Square 1 Bank loan. Under the loan agreement, as amended, we are required to raise an additional $5,000,000 on or prior to December 15, 2012 and until such time, we will be in default under the loan and the bank will no longer allow us to borrow additional amounts under the loan. In addition, our failure to comply with this financial covenant or any of the other financial covenants could result in the bank's foreclosure of our assets securing the loan. We intend to use a portion of the proceeds of this offering to repay the outstanding loan from Square 1 Bank. We are currently in discussion with Square 1 Bank to extend the December 15, 2012 date; however there can be no assurance that the outcome of such discussions will be favorable We expect to be able to borrow additional amounts under the loan upon the consummation of this Offering. In connection with the loan, we issued Square 1 Bank a warrant exercisable for 17,500 shares of our Series A Preferred Stock. The warrant is exercisable for ten years at a price of $2.10 which price is subject to adjustment for certain transactions including certain dilutive transactions.

SECURITY OWNERSHIP OF MANAGEMENT AND OTHER BENEFICIAL OWNERS

The table below sets forth information as of November 30, 2012 regarding the beneficial ownership of the Company's Common Stock, Series A Preferred Stock and Series 1 Preferred Stock as of the date of this Prospectus. Beneficial ownership generally includes voting or investment power with respect to securities. The table reflects ownership by:

* each person or entity who owns beneficially 5% or greater of the shares of the Company's outstanding Common Stock;
* each of our executive officers and directors; and
* our executive officers and directors as a group.

Except as otherwise set forth therein, each stockholder's pre-Offering percentage ownership in the following table is as of November 30, 2012 and is based on a total of number of 6,199,484 shares comprised of 4,221,448 shares of Common Stock and 1,975,628 shares of Preferred Stock issued and outstanding that converts to 1,978,036 shares of Common Stock. All share ownership figures include shares of Common Stock and Preferred Stock issued and shares of Common Stock issuable upon exercise of options or warrants that had vested as of November 30, 2012 or will vest within 60 days of November 30, 2012, which are deemed outstanding and beneficially owned by such person for purposes of computing his or her percentage ownership, but not for purposes of computing the percentage ownership of any other person. As of November 30, 2012, our Board of Directors had approved an increase in the number of awards eligible for grant under our 2009 Stock Incentive Plan for a total of 1,700,000 awards. As of November 30, 2012, 1,414,564 options were outstanding and 229,781 restricted stock awards were outstanding under our plan. All share ownership figures include 221,448 shares of restricted Common Stock for which all restrictions have lapsed and does not include 8,333 shares of restricted stock for which restrictions will lapse as of April 20, 2013. The share ownership figures do not include shares of Common Stock issuable upon conversion of outstanding notes.

Unless otherwise indicated the mailing address of each of the stockholders below is c/o Heat Biologics, Inc., 100 Europa Drive, Suite 420, Chapel Hill, North Carolina 27517. Except as otherwise indicated, and subject to applicable community property laws, except to the extent authority is shared by both spouses under applicable law, the Company believes the persons named in the table have sole voting and investment power with respect to all shares of Common Stock held by them.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage Ownership (Pre-Offering)	Percentage Ownership (excluding the over-allotment option)	Percentage Ownership (including the over-allotment option)
Executive Officers & Directors(1)				
Paul Belsky, M.D. (Director)(2)	128,406	2.06%	1.39%	1.33%
Vadim Deyev, MD, Ph.D. (3)	25,000	*%	*%	*%
Jennifer Harris, Pharm.D (4)	12,500	*%	*%	*%
Michael Kharitonov, Ph.D. (Director)(5)	153,783	2.46%	1.66%	1.59%
John Monahan, Ph.D. .. (Director)(6)	38,875	*%	*%	*%
Edward Smith (Director)(7)	1,632,201	26.19%	17.68%	16.86%
Sandra Silberman, MD, Ph.D. (8)	34,375	*%	*%	*%
Jeffrey Wolf (Director, CEO, Treasurer & Secretary)(9)	3,110,000	48.01%	32.81%	31.33%
All Executive Officers & Directors, as a group (8 persons)	5,135,140	76.82%	53.02%	50.67%
5% Stockholders(1)				
Brightline Ventures III, LLC(10)	1,603,795	25.86%	17.43%	16.61%
Eckhard Podack M.D., Ph.D.	600,000	9.67%	6.52%	6.22%
Orion Holdings V, LLC (11)	1,600,000	25.79%	17.39%	16.58%
Seed-One Holdings VI, LLC(11)	1,234,781	19.91%	13.42%	12.79%

*less than 1%

(1) Mailing address of Executive Officers, Directors and 5% or greater holders is c/o the Company, 100 Europa Drive, Suite 420, Chapel Hill, NC 27517.

(2) Dr. Belsky has been issued options exercisable for 49,500 shares of Common Stock, of which 28,406 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Dr. Belsky.

(3) Dr. Deyev has been issued options exercisable for 25,000 shares of Common Stock, of which 25,000 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Mr. Deyev.

(4) Dr .. Harris has been issued options exercisable for 50,000 shares of Common Stock, of which 12,500 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Ms. Harris.

(5) Represents 112,500 shares of Series 1 Preferred Stock which convert to 114,908 shares of Common Stock held by Sunrise Equity, LLC, an entity for which Dr. Kharitonov is the sole managing member. Dr. Khraitonov might be deemed to beneficially own the shares held by the Sunrise Equity, LLC as in his role as the managing member he has the sole control over the voting and disposition of any shares held by such entity. Dr. Kharitonov disclaims beneficial ownership of these shares except to the extent of any pecuniary interest (as defined in Rule 16a – 1(a)(2) promulgated under the Securities Exchange Act of 1934, as amended) that he may have in the Sunrise Equity, LLC. Dr. Kharitonov has been issued options exercisable for 67,000 shares of Common Stock, of which 38,875 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Dr. Kharitonov.

(6) Dr. Monahan has been issued options exercisable for 67,000 shares of Common Stock, of which 38,875 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Dr. Monahan.

(7) Mr. Smith has been issued options exercisable for 49,500 shares of Common Stock, of which 28,406 shares are vested and exercisable within 60 days of November, 2012 and included in the number of shares beneficially owned by Mr. Smith. Includes 1,603,795 shares of Series A Preferred Stock owned by Brightline Ventures III, LLC, of which Mr. Smith disclaims beneficial ownership except to the extent of any pecuniary interest.

(8) Dr. Silberman has been issued options exercisable for 45,000 shares of Common Stock, of which 34,375 shares are vested and exercisable within 60 days of November 30, 2012 and included in the number of shares beneficially owned by Ms. Silberman.

(9) Includes 1,600,000 shares of Common Stock held by Orion Holdings V, LLC and 1,234,781 shares of Common Stock held by Seed-One Holdings VI, LLC, entities for which Mr. Wolf serves as the managing member. Mr. Wolf is deemed to beneficially own the shares held by such entities as in his role as the managing member he has the control over the voting and disposition of any shares held by these entities. Does not include 200,000 shares of Common Stock beneficially owned by Mr. Wolf's children's trust which Mr. Wolf is not the trustee of. Mr. Wolf disclaims beneficial ownership of these shares except to the extent of any pecuniary interest (as defined in Rule 16a – 1(a)(2) promulgated under the Securities Exchange Act of 1934, as amended) that he may have in such entities. In addition, if our Company is traded on a recognized national exchange or NASDAQ while Mr. Wolf is employed by us and the market capitalization of our Company is in excess of $250 million for at least five consecutive trading days, then Mr. Wolf will be entitled to receive an additional stock option equal to 2% of the then outstanding shares of our Common Stock, at an exercise price equal to the then current market price as determined in good faith by the Board. Mr. Wolf has been issued options exercisable for 275,219 shares of Common Stock, of which 275,219 shares are vested and exercisable within 60 days of November 30, 2012 and are included in the beneficial ownership of Mr. Wolf.

(10) Includes 1,603,795 shares of Series A Preferred Stock. Mr. Smith is deemed to beneficially own these shares. Mr. Smith disclaims beneficial ownership of these shares except to the extent of any pecuniary interest (as defined in Rule 16a – 1(a)(2) promulgated under the Securities Exchange Act of 1934, as amended) that he may have in such entities.

(11) Mr. Wolf serves as the managing member of such entity. Mr. Wolf is deemed to beneficially own the shares held by such entity as in his role as the managing member he has the control over the voting and disposition of any shares held by this entity. Mr. Wolf disclaims beneficial ownership of these shares except to the extent of any pecuniary interest (as defined in Rule 16a – 1(a)(2) promulgated under the Securities Exchange Act of 1934, as amended) that he may have in such entity.

CERTAIN RELATIONSHIPS AND RELATED-PARTY TRANSACTIONS

The following is a summary of transactions since January 1, 2011 to which we have been a party in which the amount involved exceeded the lesser of $120,000 or one percent of the average of our total assets at the end of the two fiscal years completed prior to January 1, 2011 and in which any of our executive officers, directors or beneficial holders of more than five percent of our capital stock had or will have a direct or indirect material interest, other than compensation arrangements which are described under the section of this Prospectus entitled "Management—Non-Employee Director Compensation" and "Management — Executive Compensation."

Pursuant to our funding agreement with the University of Miami, the university with whom we have entered into licensing agreements, has been issued shares of Heat Biologics I, Inc. representing 7.5% of the outstanding shares of Heat Biologics I, Inc.

In 2008, we advanced $75,000 to Jeff Wolf, our Chief Executive Officer. At December 31, 2010 and 2011 the outstanding balance on the loan receivable was $6,138 and $0, respectively. The line of credit was paid in full on July 22, 2011.

In 2010, we issued convertible notes in the aggregate principal amount of $926,000 to Brightline Ventures III, LLC, the managing member of which is Edward Smith, a member of our Board of Directors. In 2011, we issued additional convertible notes in the aggregate principal amount of $1,347,709 to the same investor. In September 2011, all of the notes were converted into 1,101,769 shares of Series A Preferred Stock.

We paid Dr. Eckhard Podack, the Chairman of our Scientific and Advisory Board , consulting fees of $43,750 and $31,250 for the years ended December 31, 2010 and 2011.

During the year ended December 31, 2011, we paid $50,000 to Sol Barer, a member of our Scientific and Advisory Board, $26,000 to Taffy Williams, a prior member of management , for consulting fees .. During the year ended December 31, 2010, Jeff Wolf, advanced us $12,500. Interest is calculated on the outstanding balance annually at 3.25%. As of December 31, 2011 and 2010, the outstanding balance was $12,500. At December 31, 2011 and 2010, accrued interest on this payable was $686 and $280, respectively. As of September 30, 2012 (unaudited), the outstanding balance was $12,500. At September 30, 2012 (unaudited), accrued interest on this payable was $991.

The Company had a related party payable balance of $12,371 and $9,979 as of December 31, 2011 and 2010, respectively ..

In June 2012, we sold our 92.5% interest in Heat Biologics II, Inc. to a related party entity in exchange for $9,250 in cash and a receivable of $296,224 based upon an independent appraisal report issued April 2012. Interest accrues on the receivable at a rate of 6% per annum. At September 30, 2012, the Company had a related party receivable from this entity for $6,241 related to invoices received by the Company pertaining to expenses of Heat II incurred subsequent to the sale of Heat II. This amount is also recorded in the Company's accounts payable as of September 30, 2012.

On July 9, 2008, we entered into a Loan and Security Agreement with Comercia Bank for an amount of $250,000.

During 2010, Jeff Wolf contributed office space and other utilities to us having a fair value of $5,760.

Listing

We intend to apply to have our Common Stock listed on the NASDAQ Capital Market under the symbol "HEAX."

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is XX and its telephone number is XX.

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has not been a public market for shares of our Common Stock. Future sales of substantial amounts of shares of our Common Stock, including shares issued upon the exercise of outstanding option awards, in the public market after this offering, or the possibility of these sales occurring, could cause the prevailing market price for our Common Stock to fall or impair our ability to raise equity capital in the future.

Upon the completion of this Offering, a total of 9,199,484 shares of Common Stock will be outstanding, assuming (a) that there are no exercises of option awards and (b) no exercise of the underwriters' over-allotment option. Of these shares, all 3,000,000 shares of Common Stock sold in this offering by us will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act.

The remaining 6,199,484 shares of Common Stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Subject to the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, these restricted securities will be available for sale in the public market as follows:

Date	Number of Shares
On the date of this prospectus	3,000,000
Between 90 and 180 days after the date of this prospectus	4,534,484

In addition, as of November 30, 2012, a total of 1,414,564 shares of our Common Stock were subject to outstanding option awards, of which option awards to purchase 1,119,522 shares of Common Stock will be vested and eligible for sale 180 days after the date of this prospectus, 229,781 shares of restricted stock were issued, of which 229,781 will be fully vested and eligible for sale 180 days after the date of this prospectus and a total of 122,262 shares of our Common Stock were subject to outstanding warrants that will be exercisable and eligible for sale 180 days after the date of this prospectus.

Rule 144

In general, under Rule 144, a person deemed to be one of our affiliates for purposes of the Securities Act and who owns shares that were acquired from us or an affiliate of us at least six months prior to the proposed sale is entitled to sell upon the expiration of the lock-up agreements described below, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- one percent of the number of shares of Common Stock then outstanding, which will equal approximately 91,995 shares immediately after the offering; and
- the average weekly trading volume of the Common Stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

These sales are also subject to manner of sale provisions, notice requirements and the availability of current public information about us.

Under Rule 144, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell such shares without volume limitations, subject only to the availability of current public information about us. A non-affiliated person who has beneficially owned restricted securities within the meaning of Rule 144 for at least one year is entitled to sell those shares without regard to the provisions of Rule 144.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, consultants or advisors who purchase shares from us in connection with a compensatory stock or option plan or other written agreement in a transaction that was completed in reliance on Rule 701 and complied with the requirements of Rule 701 will be eligible to resell such shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with certain restrictions, including the holding period, contained in Rule 144.

Lock-Up Agreements

Each of our officers and directors, and certain of our existing shareholders and holders of options and warrants to purchase shares of our Common Stock, representing an aggregate of approximately 77% of our outstanding shares prior to the Offering, have agreed, subject to certain exceptions, not to offer, sell, contract to sell or otherwise dispose of, or enter into any transaction that is designed to, or could reasonably be expected to, result in the disposition of any shares of our Common Stock or other securities convertible into or exchangeable or exercisable for shares of our Common Stock or derivatives of our Common Stock owned by these persons prior to this offering or Common Stock issuable upon exercise of options or warrants held by these persons for a period of 180 days after the effective date of the registration statement of which this prospectus is a part without the prior written consent of Deutsche Bank Securities Inc. This consent may be given at any time without public notice. We have entered into a similar agreement with the representative of the underwriters, see "Underwriters." There are no agreements between the representative and any of our shareholders or affiliates releasing them from these lock-up agreements prior to the expiration of the 180-day period.

The 180-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 180-day restricted period we issue an earnings release or material news, or a material event relating to us occurs; or
- prior to the expiration of the 180-day restricted period we announce that we will release earnings results during the 16-day period following the last day of the 180-day period.

in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

The lock-up restrictions will not apply to shares of Common Stock acquired in open-market transactions after the closing of the offering. The lock-up restrictions also will not apply to certain transfers not involving a disposition for value provided that the transferee agrees to be bound by these lock-up restrictions and provided no filing by any person under the Exchange Act is required or will be voluntarily made and no person will be required by law to make or voluntarily make any public announcement of the transfer. In addition, our officers, directors and certain of our existing shareholders that purchase shares of Common Stock pursuant to the directed share program may transfer their directed shares provided no filing by any person under the Exchange Act is required or will be voluntarily made and no person will be required by law to make or voluntarily make any public announcement of the transfer. Our shareholders who have not agreed to the foregoing lock-up restrictions with Deutsche Bank Securities Inc. are parties to agreements with us that restrict their ability to sell our securities for 180 days after the effective date of the registration statement of which this prospectus is part.

Registration Statements

We intend to file a registration statement on Form S-8 under the Securities Act covering shares of Common Stock subject to options outstanding or reserved for issuance under our stock plans. We expect to file this registration statement after this Offering. However, none of the shares registered on Form S-8 will be eligible for resale until the expiration of the lock-up agreements to which they are subject.

UNDERWRITERS

Subject to the terms and conditions of an underwriting agreement, dated _____, 2012, we have agreed to sell to each of the underwriters named below, and each of the underwriters, for which [_____], is acting as representative, have severally, and not jointly, agreed to purchase on a firm commitment basis the number of shares offered in this offering set forth opposite their respective names below, at the public offering price, less the underwriting discount set forth on the cover page of this prospectus.

Underwriter	Number of Shares
Total	

Nature of Underwriting Commitment

The underwriting agreement provides that the underwriters are committed to purchase on a several but not joint basis all shares offered in this offering, other than those covered by the over-allotment option described below, if the underwriters purchase any of these securities. The underwriting agreement provides that the obligations of the underwriters to purchase the shares offered hereby are conditional and may be terminated at their discretion based on their assessment of the state of the financial markets. The obligations of the underwriters may also be terminated upon the occurrence of other events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to the authorization and the validity of the shares being accepted for listing on The NASDAQ Capital Market and to various other customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions of our counsel.

State Blue Sky Information

We intend to offer and sell the shares offered hereby to retail customers and institutional investors in all 50 states. However, we will not make any offer of these securities in any jurisdiction where the offer is not permitted.

Pricing of Securities

The underwriters have advised us that they propose to offer the shares directly to the public at the public offering price set forth on the cover page of this prospectus, and to certain dealers that are members of the Financial Industry Regulatory Authority (FINRA), at such price less a concession not in excess of US$ per share. The underwriters may allow, and the selected dealers may reallow, a concession not in excess of US$ per share to certain brokers and dealers. After this offering, the offering price and concessions and discounts to brokers and dealers and other selling terms may from time to time be changed by the underwriters. These prices should not be considered an indication of the actual value of our shares and are subject to change as a result of market conditions and other factors. No variation in those terms will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

Underwriting Compensation

The following table summarizes the compensation to be paid to the underwriters by us and the proceeds, before expenses, payable to us, assuming a $ offering price. The information assumes either no exercise or full exercise by the underwriters of the over-allotment option, as indicated.

	Fee Per Share of Common Stock (1)	Total Without Exercise of Over-Allotment	Total With Exercise of Over-Allotment
Public offering price	$	$	$
Discount (7%)	$	$	$
Proceeds, before expenses, to us			

(1) The fees do not include the warrants or expense reimbursement provisions described below.

We estimate that the total expenses of this offering, excluding the underwriters' discount and the non-accountable expense allowance, are approximately US$.

We have paid an expense deposit of $_____ to the representatives, which will be applied against the accountable expenses that will be paid by us to the underwriters in connection with this offering. The underwriting agreement, however, provides that in the event the offering is terminated, the $___ expense deposit paid to the representative will be returned to the extent offering expenses are not actuallyincurred.

We have granted a 45-day option to the representatives of the underwriters to purchase additional shares up to an additional 15% of shares sold in the offering (additional shares) solely to cover over-allotments, if any, at the same price as the initial shares offered. If the underwriters fully exercise the over-allotment option, the total public offering price, underwriting fees and expenses and net proceeds (before expenses and non-accountable expense allowance) to us will be US$, US$, and US$, respectively.

The Underwriting Agreement provides for reciprocal indemnification between the Company and [_____] against certain liabilities in connection with this prospectus and the registration statement, of which this prospectus forms a part, including liabilities under the Securities Act.

We will sell to [_____], for nominal consideration Underwriter's Warrant equal to 5% of the number of shares of Common Stock sold in the Offering, which is 150,000 Underwriter's Warrants and 172,500 Underwriter's Warrants if we sell the additional underwriter's over-allotment option. The Underwriter's Warrants may be exercised at any time commencing one year from the completion of the offering and continuing for four years thereafter to purchase shares of Common Stock at an exercise price equal to 125% of the offering price of the shares in this offering and will provide for cashless exercise at all times.

In accordance with subparagraph (g) (1) of Rule 5110 of the FINRA Rules, the Underwriter's Warrants shall not be sold during the offering, or sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness of the Registration Statement or commencement of sales of the public offering, except as provided in subparagraph (g)(2) of Rule 5110 of the FINRA Rules. In addition, the warrants provide for registration rights upon request, in certain cases. The demand registration right provided will not be greater than five years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(iv). The piggyback registration right provided will not be greater than seven years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(v). We will bear all fees and expenses attendant to registering the securities issuable on exercise of the warrants other than underwriting commissions incurred and payable by the holders.

The exercise price and number of shares issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, extraordinary cash dividend or our recapitalization, reorganization, merger or consolidation. However, the warrant exercise price or underlying shares will not be adjusted for issuances of shares of common stock at a price below the warrant exercise price.

Lock-Up Agreements. Pursuant to certain "lock-up" agreements, we, our executive officers and directors, and certain of our stockholders have agreed, subject to certain exceptions, not to offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic risk of ownership of, directly or indirectly, engage in any short selling of any common stock or securities convertible into or exchangeable or exercisable for any common stock, whether currently owned or subsequently acquired, without the prior written consent of the underwriter, for a period of 180 days after the date of this prospectus.

Right of First Refusal. Until twelve months after the closing date of the offering, the representative shall have a right of first refusal to purchase for its account or to sell for our account, or any subsidiary or successor, any securities of our company or any such subsidiary or successor which we or any subsidiary or successor may seek to sell in public or private equity and public debt offerings during such twelve (12)-month period.

[_____] is principally engaged in providing securities brokerage, investment banking and related financial services to individuals, institutions and corporations. [_____] also provides consulting and financial services to private and public entities seeking to obtain or participate in financing arrangements.

Prior to this offering, there has been no public trading market for our securities. Consequently, the initial public offering price of the shares has been determined by negotiations between us and the underwriters and bears no relationship to our earnings, book value, net worth or other financial criteria of value and may not be indicative of the market price of our Common Stock after this offering. Among the factors considered in determining the offering price were our financial condition and prospects, market prices of similar securities of comparable publicly-traded companies, certain financial and operating information of companies engaged in activities similar to ours, prior valuations that we received and the general condition of the securities market. Additionally, the initial public offering price of our shares may not be indicative of the prices that may prevail in the public market.

Stabilization, Short Positions and Penalty Bids

The underwriters may engage in stabilizing transactions, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the Common Stock, in accordance with Regulation M under the Securities Exchange Act of 1934 (the "Exchange Act"):

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum;
- Over-allotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any covered short position by either exercising its over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the Common Stock in the open market after the distribution has been completed in order to cover syndicate short positions. If the underwriters sell more shares than could be covered by the maximum number of shares offered hereby, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering; and
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the Common Stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our Common Stock or preventing or delaying a decline in the market price of the Common Stock. As a result, the price of the Common Stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ or otherwise and, if commenced, may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the Common Stock. In addition, neither we nor the underwriters make representation that the underwriters will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution of Prospectus

A prospectus in electronic format relating to our offering may be made available on the Internet sites or through other online services maintained by the underwriters or selling group members participating in this offering, or their affiliates. In those cases, prospective investors may view offering terms online and may be able to open an account online with the underwriters to participate in the public offering.

Other than the prospectus in electronic format, the information on the underwriters' or any selling group member's website and any information contained in any other website maintained by the underwriters or a selling group member is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us, any underwriter or any selling group member in its capacity as underwriter or selling group member and should not be relied upon by investors.

SELLING RESTRICTIONS

Foreign Regulatory Restrictions on Purchase of Shares

We have not taken any action to permit a public offering of shares of our Common Stock outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about and observe any restrictions relating to this offering of shares of our Common Stock and the distribution of the prospectus outside the United States.

China

This prospectus may not be circulated or distributed in the People's Republic of China (China) and the securities may not be offered or sold, and will not offer or sell to any person for re-offering or resale directly or indirectly to any resident of China except pursuant to applicable laws and regulations of China. For the purpose of this paragraph, China does not include Taiwan and the special administrative regions of Hong Kong and Macau.

France

This offering document has not been prepared in the context of a public offering of securities in France (offre au public) within the meaning of Article L.411-1 of the French Code monétaire et financier and Articles 211-1 and seq. of the *Autorité des marchés financiers* (AMF) regulations and has therefore not been submitted to the AMF for prior approval or otherwise.

The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France and neither this offering document nor any other offering material relating to the securities has been distributed or caused to be distributed or will be distributed or caused to be distributed to the public in France, except only to persons licensed to provide the investment service of portfolio management for the account of third parties and/or to "qualified investors" (as defined in Article L.411-2, D.411-1 and D.411-2 of the French *Code monétaire et financier*) and/or to a limited circle of investors (as defined in Article L.411-2, D.411-4 of the French*Code monétaire et financier*) on the condition that no such offering document nor any other offering material relating to the securities shall be delivered by them to any person nor reproduced (in whole or in part). Such "qualified investors" are notified that they must act in that connection for their own account in accordance with the terms set out by Article L.411-2 of the French *Code monétaire et financier* and by Article 211-4 of the AMF Regulations and may not re-transfer, directly or indirectly, the securities in France, other than in compliance with applicable laws and regulations and in particular those relating to a public offering (which are, in particular, embodied in Articles L.411-1, L.412-1 and L.621-8 and seq. of the French *Code monétaire et financier*).

You are hereby notified that in connection with the purchase of these securities, you must act for your own account in accordance with the terms set out by Article L.411-2 of the French *Code monétaire et financier* and by Article 211-4 of the AMF Regulations and may not re-transfer, directly or indirectly, the securities in France, other than in compliance with applicable laws and regulations and in particular those relating to a public offering (which are, in particular, embodied in Articles L.411-1, L.411-2, L.412-1 and L.621-8 and seq. of the French *Code monétaire et financier*).

Germany

Any offer or solicitation of securities within Germany must be in full compliance with the German Securities Prospectus Act (*Wertpapierprospektgesetz — WpPG*). The offer and solicitation of securities to the public in German requires the approval of the prospectus by the German Federal Financial Services Supervisory Authority

(*Bundesanstalt für Finanzdienstleistungsaufsicht — BaFin*). This prospectus has not been and will not be submitted for approval to the BaFin. This prospectus does not constitute a public offer under the WpPG. This prospectus and any other document relating to the securities, as well as any information contained therein, must not be supplied to the public in Germany or used in connection with any offer for subscription of the securities to the public in Germany, any public marketing of the securities or any public solicitation for offers to subscribe for or otherwise acquire the securities. The prospectus and other offering materials relating to the offer of securities are strictly confidential and may not be distributed to any person or entity other than the designated recipients hereof.

Hong Kong

The securities have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance.

No advertisement, invitation or document, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) has been issued or will be issued in Hong Kong or elsewhere other than with respect to the securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance and any rules made under that Ordinance.

WARNING

The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters purchasing for their own account, venture capital funds, and entities with stockholders' equity in excess of NIS 250 million, each as defined in the Addendum (as it may be amended from time to time, collectively referred to as institutional investors). Institutional investors may be required to submit written confirmation that they fall within the scope of the Addendum. In addition, we may distribute and direct this document in Israel, at our sole discretion, to certain other exempt investors or to investors who do not qualify as institutional or exempt investors, provided that the number of such non-qualified investors in Israel shall be no greater than 35 in any 12-month period.

Italy

The offering of the securities has not been registered with the *Commissione Nazionale per le Società e la Borsa* (CONSOB), in accordance with Italian securities legislation. Accordingly, the securities may not be offered or sold, and copies of this offering document or any other document relating to the securities may not be distributed in Italy except to Qualified Investors, as defined in Article 34- *ter*, subsection 1, paragraph b) of CONSOB Regulation no. 11971 of May 14, 1999, as amended (the Issuers' Regulation), or in any other circumstance where an express exemption to comply with public offering restrictions provided by Legislative Decree no. 58 of February 24, 1998 (the Consolidated Financial Act) or Issuers' Regulation applies, including those provided for under Article 100 of the Finance Law and Article 34- *ter* of the Issuers' Regulation, and provided, however, that any such offer or sale of the securities or distribution of copies of this offering document or any other document relating to the securities in Italy must (1) be made in accordance with all applicable Italian laws and regulations, (2) be conducted in

accordance with any relevant limitations or procedural requirements that CONSOB may impose upon the offer or sale of the securities, and (3) be made only by (a) banks, investment firms or financial companies enrolled in the special register provided for in Article 107 of Legislative Decree no. 385 of September 1, 1993, to the extent duly authorized to engage in the placement and/or underwriting of financial instruments in Italy in accordance with the Consolidated Financial Act and the relevant implementing regulations; or (b) foreign banks or financial institutions (the controlling shareholding of which is owned by one or more banks located in the same EU Member State) authorised to place and distribute securities in the Republic of Italy pursuant to Articles 15, 16 and 18 of the Banking Act, in each case acting in compliance with all applicable laws and regulations.

India

This document has not been and will not be registered as a prospectus or a statement in lieu of prospectus with any registrar of companies in India. This document has not been and will not be reviewed or approved by any regulatory authority in India, including the Securities and Exchange Board of India, any registrar of companies in India or any stock exchange in India. This document and this offering of securities are not and should not be construed as an invitation, offer or sale of any securities to the public in India. Other than in compliance with the private placement exemptions under applicable laws and regulations in India, including the Companies Act, 1956, as amended, the securities have not been, and will not be, offered or sold to the public or any member of the public in India. This document is strictly personal to the recipient and neither this document nor the offering of the securities is calculated to result, directly or indirectly, in the securities becoming available for subscription or purchase by persons other than those receiving the invitation or offer.

Singapore

The offer or invitation which is the subject of this document is only allowed to be made to the persons set out herein. Moreover, this document is not a prospectus as defined in the Securities and Futures Act (Chapter 289) of Singapore (SFA) and accordingly, statutory liability under the SFA in relation to the content of the document will not apply.

As this document has not been and will not be lodged with or registered as a document by the Monetary Authority of Singapore, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the securities may not be circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than: (1) to an institutional investor under Section 274 of the SFA; (2) to a relevant person, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA; or (3) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person who is:

(a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, securities, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the securities under Section 275 of the SFA except:

(1) to an institutional investor under Section 274 of the SFA or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than $100,000 (or its equivalent

foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets;

(2) where no consideration is given for the transfer; or

(3) by operation of law.

By accepting this document, the recipient hereof represents and warrants that he is entitled to receive such report in accordance with the restrictions set forth above and agrees to be bound by the limitations contained herein. Any failure to comply with these limitations may constitute a violation of law.

Switzerland

This document does not constitute a prospectus within the meaning of Article 652a of the Swiss Code of Obligations. The securities of ROI Acquisition Corp. may not be sold directly or indirectly in or into Switzerland except in a manner which will not result in a public offering within the meaning of the Swiss Code of Obligations. Neither this document nor any other offering materials relating to the securities may be disturbed, published or otherwise made available in Switzerland except in a manner which will not constitute a public offer of the securities of ROI Acquisition Corp. in Switzerland.

United Kingdom

Each underwriter has represented and agreed that it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000) in connection with the issue or sale of the securities in circumstances in which Section 21(1) of such Act does not apply to us and it has complied and will comply with all applicable provisions of such Act with respect to anything done by it in relation to any securities in, from or otherwise involving the United Kingdom.

LEGAL MATTERS

The validity of the shares of Common Stock offered hereby will be passed upon for us by Gracin & Marlow, LLP, New York, New York, will act as counsel to us.

EXPERTS

The consolidated financial statements (a development stage company) as of December 31, 2011 and 2010 and for each of the two years in the period ended December 31, 2011 included in this Prospectus and in the Registration Statement have been so included in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern) appearing elsewhere herein and in the Registration Statement, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Common Stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the Common Stock offered hereby, reference is made to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. A copy of the registration statement and the exhibits and schedules filed therewith may be inspected without charge at the public reference room maintained by the SEC, located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549, and copies of all or any part of the registration statement may be obtained from such offices upon the payment of the fees prescribed by the SEC. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room. The SEC also maintains an Internet web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the site is www.sec.gov.

INDEX TO FINANCIAL STATEMENTS

Independent Auditors' Report

Board of Directors
Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Chapel Hill, North Carolina

We have audited the accompanying consolidated balance sheets of Heat Biologics, Inc. and Subsidiaries (the "Company") (a development stage company) as of December 31, 2011 and 2010 and the related consolidated statements of operations, stockholders' deficit, and cash flows for each of the two years in the period ended December 31, 2011 and for the period from June 10, 2008 (inception) to December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Heat Biologics, Inc. and Subsidiaries at December 31, 2011 and 2010, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2011 and the period from June 10, 2008 (inception) to December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has net losses of $3,515,082 from inception, negative cash flows from operations of $2,865,733 from inception, a working capital deficiency of $342,496 and a stockholders' deficit of $334,098 that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

BDO USA, LLP

Raleigh, North Carolina
September 14, 2012

Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Consolidated Balance Sheets

	December 31, 2011	December 31, 2010	September 30, 2012 (Unaudited)
Assets			
Current Assets			
Cash and cash equivalents	$ 98,646	$ 169,437	$ 131,324
Grants receivable	-	223,295	-
Receivable from related party	-	-	6,241
Loan receivable from officer	-	6,138	-
Prepaid expenses and other current assets	5,593	3,695	59,201
Total Current Assets	104,239	402,565	196,766
Property and Equipment, Net	11,589	-	11,037
Other Assets			
Restricted cash	1,712	-	26,197
Debt issuance costs, net	55,007	25,285	30,360
Deposits	9,520	-	9,320
Total Other Assets	66,239	25,285	65,877
Total Assets	$ 182,067	$ 427,850	$ 273,680
Liabilities and Stockholders' Deficit			
Current Liabilities			
Accounts payable	$ 364,496	$ 345,653	$ 445,130
Accrued expenses and other payable	25,901	3,125	89,383
Accrued interest	686	15,166	4,476
Liabilities related to discontinued operations	55,652	-	-
Convertible notes payable	-	600,000	-
Total Current Liabilities	446,735	963,944	538,989
Long Term Liabilities			
Related party payable	12,500	12,500	12,500
Notes payable	-	-	425,000
Convertible notes payable - less current portion	-	576,000	80,204
Preferred stock warrants liability	56,930	-	84,370
Total Liabilities	516,165	1,552,444	1,141,063
Stockholders' Deficit			
Series 1 preferred stock, $.0001 par value; 112,500 shares authorized 112,500 shares issued and outstanding	11	-	11
Series A preferred stock, $.0001 par value; 2,000,000 shares authorized 1,347,255 shares issued and outstanding at December 31, 2011 and 2010 and 1,863,128 shares issued and outstanding at September 30, 2012	134	11	186
Common stock, $.0001 par value; 50,000,000 shares authorized; 4,879,926 shares issued; 4,203,114 shares outstanding at December 31, 2011; 4,218,114 shares outstanding at September 30, 2012;4,131,017 shares outstanding at December 31, 2010	400	400	400
Additional paid in capital	3,205,753	302,249	4,369,315
Deficit accumulated during the development stage	(3,515,082)	(1,410,198)	(5,186,473)
Total Stockholders' Deficit - Less Non-Controlling Interest	(308,784)	(1,107,538)	(816,561)
Non-Controlling Interest	(25,314)	(17,056)	(50,822)
Total Stockholders' Deficit	(334,098)	(1,124,594)	(867,383)
Total Liabilities and Stockholders' Deficit	$ 182,067	$ 427,850	$ 273,680

See accompanying notes to consolidated statements.

Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Operations

	Year Ended December 31,		Nine Months Ended September 30,		June 10, 2008 (Inception) to September 30, 2012
	2011	2010	2012	2011	
			(Unaudited)		(Unaudited)
Revenue					
Grant awards	$ 187,787	$ 375,692	$ 3,110	$ 187,787	$ 585,589
Operating Expenses					
Research and development	1,246,587	562,855	591,395	1,009,521	2,815,021
Clinical trials and research	255,210	150,362	199,980	174,654	605,552
General and administration	720,790	246,063	813,660	462,080	1,919,526
Total Operating Expenses	2,222,587	959,280	1,605,035	1,646,255	5,340,099
Loss from Operations	(2,034,800)	(583,588)	(1,601,925)	(1,458,468)	(4,754,510)
Nonoperating Income (Expenses)					
Interest income	517	168	-	459	685
Other (expense) income	(1,526)	-	774	(8,338)	(752)
Interest expense	(63,173)	(42,442)	(77,369)	(61,425)	(195,744)
Total Nonoperating Expenses	(64,182)	(42,274)	(76,595)	(69,304)	(195,811)
Loss from Continuing Operations	(2,098,982)	(625,862)	(1,678,520)	(1,527,772)	(4,950,321)
Loss from Discontinued Operations	(14,160)	(95,982)	(18,379)	(14,160)	(286,974)
Net Loss Before Income Tax Expense	(2,113,142)	(721,844)	(1,696,899)	(1,541,932)	(5,237,295)
Income Tax Expense	-	-	-	-	-
Net Loss	(2,113,142)	(721,844)	(1,696,899)	(1,541,932)	(5,237,295)
Less: net loss - non-controlling interest	(8,258)	(10,406)	(25,508)	(8,258)	(50,822)
Net Loss Attributable to Controlling Interest	$ (2,104,884)	$ (711,438)	$ (1,671,391)	$ (1,533,674)	$ (5,186,473)
Basic and Diluted Loss per Common Share					
From Continuing Operations	$ (0.50)	$ (0.15)	$ (0.40)	$ (0.37)	
From Discontinued Operations	(0.00)	(0.02)	(0.00)	(0.00)	
Basic and Diluted Loss per Common Share	$ (0.50)	$ (0.17)	$ (0.40)	$ (0.37)	
Basic and diluted weighted average common shares outstanding during the period	4,197,332	4,084,722	4,210,365	4,169,723	

See accompanying notes to consolidated statements.

Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Stockholders' Deficit

	Preferred Stock Series 1 Amount	Preferred Stock Series A Amount	Common Stock Amount	Additional Paid In Capital	Deficit Accumulated During Development Stage	Non-Controlling Interest	Total Stockholders' Deficit
Common Stock Issued:							
June 10, 2008, 3,209,781 shares	$ -	$ -	$ 321	$ -	$ -	$ -	$ 321
July 11, 2008, 600,000 shares	-	-	60	-	-	-	60
July 11, 2008, 423,309 shares	-	-	42	-	-	-	42
Non-cash consideration for rent	-	-	-	4,104	-	-	4,104
Net loss	-	-	-	-	(281,971)	-	(281,971)
Balance, December 31, 2008	-	-	423	4,104	(281,971)	-	(277,444)
Common Stock Issued:							
January 1, 2009, 140,000 shares	-	-	14	-	-	-	14
April 20, 2009, 50,219 shares	-	-	5	-	-	-	5
April 29, 2009, 226,836 shares			23				23
Common Stock Cancelled:							
June 26, 2009, (650,145) shares	-	-	(65)	65	-	-	-
Preferred Stock Issued:							
November 3, 2009, 112,500 shares at $2.22 per share	-	11	-	249,989	-	-	250,000
Non-cash consideration for rent	-	-	-	5,760	-	-	5,760
Stock based compensation	-	-	-	13,364	-	-	13,364
Net loss	-	-	-	-	(416,789)	(6,650)	(423,439)
Balance, December 31, 2009	-	11	400	273,282	(698,760)	(6,650)	(431,717)
Non-cash consideration for rent	-	-	-	5,760	-	-	5,760
Stock based compensation	-	-	-	30,791	-	-	30,791
Stock issuance costs	-	-	-	(7,584)	-	-	(7,584)
Net loss	-	-	-	-	(711,438)	(10,406)	(721,844)
Balance, December 31, 2010	-	11	400	302,249	(1,410,198)	(17,056)	(1,124,594)
Notes Payable Converted to Preferred Stock:							
September 30, 2011, 1,101,769 shares at $2.10 per share	-	110	-	2,313,605	-	-	2,313,715
September 30, 2011, 123,939 shares at $2.10 per share	-	12	-	260,260	-	-	260,272
September 30, 2011, 48,092 shares at $2.10 per share	-	5	-	100,988	-	-	100,993
Preferred Stock Issued:							
December 20, 2011, 73,455 shares at $2.10 per share	-	7	-	154,248	-	-	154,255
Preferred Series A Converted to Preferred Series 1, December 16, 2011, 112,500 shares at $2.22 per share	11	(11)	-	-	-	-	-
Stock based compensation	-	-	-	91,984	-	-	91,984
Stock issuance costs	-	-	-	(17,581)	-	-	(17,581)
Net loss	-	-	-	-	(2,104,884)	(8,258)	(2,113,142)
Balance, December 31, 2011	11	134	400	3,205,753	(3,515,082)	(25,314)	(334,098)
Preferred Stock Issued:							
March 7, 2012, 47,619 shares at $2.10 per share (unaudited)	-	5	-	99,995	-	-	100,000
April 3, 2012, 39,683 shares at $2.10 per share (unaudited)	-	4	-	83,330	-	-	83,334
April 27, 2012, 428,571 shares at $2.10 per share (unaudited)	-	43	-	899,957	-	-	900,000
Stock based compensation (unaudited)	-	-	-	80,980	-	-	80,980
Stock issuance costs (unaudited)	-	-	-	(700)	-	-	(700)
Net loss (unaudited)	-	-	-	-	(1,671,391)	(25,508)	(1,696,899)
Balance, September 30, 2012 (unaudited)	$ 11	$ 186	$ 400	$ 4,369,315	$ (5,186,473)	$ (50,822)	$ (867,383)

See accompanying notes to consolidated statements.

Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Cash Flows

	Year Ended December 31,		Nine Months Ended September 30,		June 10, 2008 (Inception) to September 30, 2012
	2011	2010	2012	2011	
			(Unaudited)		(Unaudited)
Operating Activities					
Net loss	$ (2,113,142)	$ (721,844)	$ (1,696,899)	$ (1,541,932)	$ (5,237,295)
Adjustments to reconcile net loss to net cash used by operations:					
Depreciation	624	-	2,332	-	2,956
Amortization of debt issuance costs	26,168	13,887	56,327	25,285	96,382
Remeasurement of fair value of preferred stock warrant liability	1,040	-	(4,240)	-	(3,200)
Non-cash consideration for rent	-	5,760	-	-	15,624
Stock based compensation	91,984	30,791	80,980	60,945	217,119
Increase (decrease) in cash arising from changes in assets and liabilities:					
Grants receivable	223,295	(223,295)	-	223,295	-
Related party receivable	-	-	(6,241)	-	(6,241)
Prepaid expenses and other current assets	(1,898)	5,805	(53,608)	2,118	(59,201)
Restricted cash	(1,712)	-	(24,485)	4,101	(26,197)
Deposits	(9,520)	-	200	(5,200)	(9,320)
Accounts payable	74,495	271,441	24,982	62,835	445,130
Accrued expenses and other payables	22,776	(154,529)	63,482	466	89,383
Accrued interest	36,791	13,517	3,790	-	55,747
Net Cash Used by Operating Activities	(1,649,099)	(758,467)	(1,553,380)	(1,168,087)	(4,419,113)
Cash Flows from Investing Activities					
Purchase of property and equipment	(12,213)	-	(1,780)	(10,213)	(13,993)
Decrease in loan receivable from officer	6,138	-	-	-	-
Net Cash Used in Investing Activities	(6,075)	-	(1,780)	(10,213)	(13,993)

See accompanying notes to consolidated statements.

Heat Biologics, Inc. and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Cash Flows (Continued)

	Year Ended December 31,		Nine Months Ended September 30,		June 10, 2008 (Inception) to September 30,
	2011	2010	2012	2011	2012
			(Unaudited)		(Unaudited)
Financing Activities					
Borrowings on notes payable	-	12,500	650,000	-	662,500
Borrowings on line of credit	-	13,390	-	-	273,427
Payments on notes payable	-	-	(225,000)	-	(225,000)
Payments on line of credit	-	(262,890)	-	-	(273,427)
Issuance of convertible notes payable, net of issuance costs	1,447,709	1,136,828	80,204	1,483,814	2,664,741
Issuance of common stock	-	-	-	-	465
Issuance of series A preferred stock	154,255	-	1,083,334	-	1,487,589
Stock issuance costs	(17,581)	(7,584)	(700)	(700)	(25,865)
Net Cash Provided by Financing Activities	1,584,383	892,244	1,587,838	1,483,114	4,564,430
Net (Decrease) Increase in Cash and Cash Equivalents	(70,791)	133,777	32,678	304,814	131,324
Cash and Cash Equivalents - Beginning of Period	169,437	35,660	98,646	169,437	-
Cash and Cash Equivalents - End of Period	$ 98,646	$ 169,437	$ 131,324	$ 474,251	$ 131,324
Supplemental Disclosure for Cash Flow Information					
Interest paid	$ -	$ 15,843	$ 16,773	$ -	$ 57,877
Supplemental Schedule of Noncash Investing and Financing Activities					
Notes payable converted to series A preferred stock	$ 2,674,980	$ -	$ -	$ 2,674,980	$ 2,674,980
Issuance of preferred stock warrants and debt issuance costs	$ 55,890	$ -	$ 31,680	$ -	$ 87,570
Cancellation of common stock	$ -	$ -	$ -	$ -	$ 65
Non-cash consideration for rent	$ -	$ 5,760	$ -	$ -	$ 15,624

See accompanying notes to consolidated statements.

1. Organization

Heat Biologics, Inc., ("Heat"), was incorporated in 2008 pursuant to the laws of the state of Delaware. Heat Biologics, Inc. is a development stage company focused on the development and commercialization of *ImPact* Therapy, a platform technology that offers a novel approach to treating cancer and other diseases by using live, modified cell lines to activate the immune system against specific defined targets. Heat is currently in Phase II clinical trials with its first drug for patients with advanced non-small cell lung cancer. During 2010 and part of 2011, Heat was based in Miami Beach, Florida. In July 2011, Heat moved all administrative operations to Chapel Hill, North Carolina.

Heat has owned 92.5% interests in two subsidiaries, Heat Biologics I, Inc. ("Heat I") and Heat Biologics II, Inc. ("Heat II") since their incorporation in the state of Delaware and commencement of operations on April 28, 2009. In April of 2012, the Board of Directors approved the sale of Heat's entire 92.5% interest in Heat II. An independent appraisal report, issued on April 18, 2012, was concurrently approved by the Board as an accurate assessment of Heat II's fair market value of $0.0025 per share. On June 25, 2012 a stock purchase agreement was executed for the purchase of 3,700,000 shares of Heat II common stock by a related party. The operations of Heat II through June 25, 2012, including fiscal year 2011 and 2010, and inception to date, are presented in the accompanying consolidated statements of operations as a loss from discontinued operations and on the consolidated balance sheets as liabilities related to discontinued operations.

Heat formed Heat Biologics GmbH (Heat GmbH), a wholly-owned limited liability company, organized in Germany on September 11, 2012. As of September 30, 2012, there had been no activity within Heat GmbH other than its formation.

Heat's product candidates require clinical trials and approvals from regulatory agencies, as well as acceptance in the marketplace. Part of Heat's strategy is to develop and commercialize some of its product candidates by continuing existing arrangements with academic and corporate collaborators and licensees and by entering into new collaborations.

2. Summary of Significant Accounting Policies

Basis of Accounting

Heat prepares its consolidated financial statements on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). Activities during the development stage include developing the business plan, raising capital, and developing the Company's platform technology.

Going Concern

As reflected in the accompanying consolidated financial statements, the Company is in the development stage with limited operations. As of September 30, 2012, the Company had unaudited net losses of $5,186,473 from inception, unaudited negative cash flows from operations of $4,419,113 from inception, an unaudited working capital deficiency of $342,223 and an unaudited stockholders' deficiency of $867,383. These factors raise substantial doubt about the Company's ability to continue as a going concern. The ability of the Company to continue as a going concern is dependent on the Company's ability to raise additional capital and implement its business plan. The consolidated financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

Management expects to raise additional funds in advance of depleting the Company's current funds. Management plans to raise funds by: (1) licensing technologies or products to one or more collaborative partners, (2) renegotiating third-party agreements, (3) securing additional debt financing, (4) selling additional equity securities and/or (5) obtaining additional grant awards. Management feels these actions provide the opportunity for the Company to continue as a going concern. Satisfying long-term liquidity needs may require the successful commercialization and/or partnering of arrangements for the Company's products and product candidates under development by the Company's licenses and will require additional capital. If the Company incurs operating losses for longer than expected and/or the Company is unable to raise additional capital, the Company may become insolvent and be unable to continue operations.

Principles of Consolidation

The consolidated financial statements include the accounts of Heat Biologics, Inc. and its subsidiaries, Heat I, Heat II, Heat III, Heat IV and GmbH. All significant intercompany accounts and transactions have been eliminated in consolidation. At December 31, 2011 and 2010 and September 30, 2011 Heat held a 92.5% controlling interest in Heat I and Heat II and accounts for its less than 100% interest in the consolidated financial statements in accordance with U.S. GAAP. Accordingly, the Company presents non-controlling interests as a component of stockholders' deficit on its consolidated balance sheets and reports non-controlling interest net income (loss) under the heading "net income (loss) – non-controlling interest" in the consolidated statements of operations. In June 2012, the Company sold its entire 92.5% interest in Heat II. The operations of Heat II through June 25, 2012, including fiscal year 2011 and 2010, and inception to date, are presented in the accompanying consolidated statements of operations as a loss from discontinued operations and on the consolidated balance sheets as liabilities related to discontinued operations.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents and Restricted Cash

The Company considers all cash and other highly liquid investments with initial maturities of three months or less from the date of purchase to be cash and cash equivalents. The Company had a restricted cash balance of $1,712 and $0 at December 31, 2011 and 2010, respectively, and $26,197 at September 30, 2012 (unaudited). The United States Patent and Trade Office ("USPTO") requires the Company to maintain an account with a minimum of $1,000 to be used to pay fees associated with new trademarks of the Company and one of the Company's lenders requires a minimum $25,000 cash balance to be maintained with the lending bank.

Concentration of Credit Risk

At times, cash balances may exceed the Federal Deposit Insurance Corporation ("FDIC") insurable limits. The Company has never experienced any losses related to these balances. All of the Company's cash balances were fully insured at December 31, 2011 and 2010 and September 30, 2012 and 2011. The Company believes it is not exposed to significant credit risk on cash and cash equivalents. Restricted cash includes amounts on deposit at United States Patent & Trade Office.

Financial instruments that subject the Company to risk of loss consist principally of grants receivable. For the year ended December 31, 2011 and the nine month periods ended September 30, 2012 and 2011, one grantor represented 100% of the Company's grant revenue. For the year ended December 31, 2010, three grantors represented 100% of the Company's grant revenue. As of December 31, 2010, one grantor represented 100% of the Company's grants

receivable balance. There was no grants receivable balance at December 31, 2011 or September 30, 2012 (unaudited). The Company reviews grants receivable for collectability and estimates an allowance based upon the composition of the receivable balance, historical collections, and loss experience. No allowance has been recorded historically as all grants receivable have been collected in full.

Debt Issuance Costs

Debt issuance costs include the costs incurred to obtain financing, including the fair value of preferred stock warrants at the date of issuance, and are amortized using the straight-line method, which approximates the effective interest method, over the life of the related debt. Debt issuance costs are included in the accompanying consolidated balance sheets net of amortization.

Property and Equipment

Property and equipment are stated at cost and are capitalized if the cost exceeds $500. Depreciation is calculated using the straight-line method and is based on estimated useful lives of 3 years for computer equipment and furniture and fixtures.

Preferred Stock Warrant Liability

In December 2011 and August 2012, the Company entered into a promissory note with each of two lenders and issued preferred stock warrants to each lender as consideration. The Company accounts for these freestanding warrants to purchase the Company's Series A Preferred Stock as liabilities at fair value on the accompanying consolidated balance sheets. The warrants may only be settled in shares of Series A Preferred Stock. The warrants are subject to re-measurement at each balance sheet date, and the change in fair value, if any, is recognized as other income (expense). The Company will continue to adjust the liability for changes in fair value until the earlier of (i) exercise of the warrants, (ii) conversion of the warrants into warrants to purchase common stock upon an event such as the completion of an initial public offering or (iii) expiration of the warrants. Upon conversion, the preferred stock warranty liability will be reclassified into additional paid-in capital. The Monte Carlo simulation is a generally accepted statistical method used to generate a defined number of stock price paths in order to develop a reasonable estimate of the range of the Company's future expected stock prices and minimizes standard error.

Significant assumptions used in the valuation of the warrants are as follows:

Exercise price	$2.10
Risk-free interest rate	1.65%-1.92%
Expected volatility	75.1-76.7%
Expected life (years)	10 years (from date of issuance)
Expected dividend yield	0%

Net Loss per Share

Basic net loss per share is computed by dividing net income by the weighted average number of common shares outstanding during each year. Fully diluted net loss per share is computed using the weighted average number of common shares and dilutive securities outstanding during each year. Dilutive securities having an anti-dilutive effect on diluted loss per share are excluded from the calculation.

Fair Value of Financial Instruments

The carrying amount of certain of the Company's financial instruments, including grants receivable, prepaid expenses and other current assets, other assets, deposits, accounts payable, accrued expenses and other payables, and related party payable approximate fair value due to their short maturities. The carrying value of the Company's

notes payable approximated fair value because the interest rates under those obligations approximate market rates of interest available to the Company for similar instruments.

As a basis for determining the fair value of certain of the Company's financial instruments, the Company utilizes a three-tier value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level I – Observable inputs such as quoted prices in active markets for identical assets or liabilities.

Level II – Observable inputs, other than Level I prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level III – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. The Company's financial instruments that are measured at fair value on a recurring basis consist only of the preferred stock warrant liability. The Company's preferred stock warrant liability is classified within Level III of the fair value hierarchy.

The change in the fair value of the Level III preferred stock warrant liability is summarized below:

	December 31,		September 30,	
	2011	2010	2012	2011
			(unaudited)	
Fair value at beginning of period	$ -	$ -	$ 56,930	$ -
Issuances	55,890	-	31,680	-
Change in fair value at end of period	1,040	-	(4,240)	-
Fair value at end of period	$ 56,930	$ -	$ 84,370	$ -

Marketing

Marketing costs are expensed as incurred. Marketing expense totaled $18,380 and $12,980 for the years ended December 31, 2011 and 2010, respectively. Marketing expense totaled $4,650 and $18,180 for the nine months ended September 30, 2012 and 2011 (unaudited), respectively.

Income Tax

Income taxes are accounted for using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statements carrying amounts of assets and liabilities and their respective tax bases, operating loss carryforwards, and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

In accordance with FASB ASC 740, *Accounting for Income Taxes*, the Company reflects in the financial statements the benefit of positions taken in a previously filed tax return or expected to be taken in a future tax return only when it is considered 'more-likely-than-not' that the position taken will be sustained by a taxing authority. As of December 31, 2011 and 2010 and September 30, 2012, the Company had no unrecognized income tax benefits and correspondingly there is no impact on the Company's effective income tax rate associated with these items. The

Company's policy for recording interest and penalties relating to uncertain income tax positions is to record them as a component of income tax expense in the accompanying statements of income. As of December 31, 2011 and 2010, the Company had no such accruals.

Stock-Based Compensation

The Company accounts for stock-based compensation arrangements with employees and non-employee directors using a fair value method which requires the recognition of compensation expense for costs related to all stock-based payments, including stock options. The fair value method requires the Company to estimate the fair value of stock-based payment awards on the date of grant using an option pricing model.

Stock-based compensation costs are based on the fair value of the underlying option calculated using the Black-Scholes option-pricing model on the date of grant for stock options and recognized as expense on a straight-line basis over the requisite service period, which is the vesting period. Determining the appropriate fair value model and related assumptions requires judgment, including estimating stock price volatility, forfeiture rates and expected term. The expected volatility rates are estimated based on the actual volatility of comparable public companies over the expected term. The expected term for the years ended December 31, 2011 and 2010 and the nine month periods ended September 30, 2012 and 2011 represents the average time that options are expected to be outstanding based on the mid-point between the vesting date and the end of the contractual term of the award. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company has not paid dividends and does not anticipate paying a cash dividend in the foreseeable future and, accordingly, uses an expected dividend yield of zero. The risk-free interest rate is based on the rate of U.S. Treasury securities with maturities consistent with the estimated expected term of the awards. The measurement of nonemployee share-based compensation is subject to periodic adjustments as the underlying equity instruments vest and is recognized as an expense over the period over which services are received.

Net loss attributable to non-controlling interests

Net loss attributable to non-controlling interests is the result of the Company's consolidation of subsidiaries of which it does not own 100%. The Company's net loss attributable to non-controlling interests relates to the University's ownership in Heat I and Heat II.

Revenue Recognition

The Company recognizes government grants when there is reasonable assurance that they will comply with the conditions attached to the grants and that the grants will be received. The grants are recognized using an income approach and grant revenue is recognized as the related expenses are incurred.

Research and Development

Research and development costs are expensed as incurred. The Company has acquired exclusive licensing rights to intellectual property to further its research and development. These costs are expensed as incurred. The Company also incurs legal costs relating to the filing and application fees for patents which are owned by the universities with which the Company has license agreements. These costs are also expensed as research and development expense as incurred.

Reclassifications

In certain instances, amounts previously reported in the 2011 consolidated financial statements have been reclassified to conform to the September 30, 2012 (unaudited) consolidated financial statement presentation. Such reclassifications had no effect on net loss or stockholders' deficit as previously reported.

Recent Accounting Pronouncements

In May 2011, the Financial Accounting Standards Board ("FASB") amended the FASB Accounting Standards Codification ("ASC") to converge the fair value measurement guidance in U.S. GAAP and International Financial Reporting Standards. Some of the amendments clarify the application of existing fair value measurement requirements, while other amendments change particular principles in fair value measurement guidance. In addition, the amendments require additional fair value disclosures. The amendments are effective for fiscal years beginning after December 15, 2011 and should be applied prospectively. These amendments impact the Company's financial statement disclosures only and became effective in the nine month period ending September 30, 2012. The adoption of these amendments did not have a material impact on the Company's consolidated financial statements.

In August 2012, the Financial Accounting Standards Board ("FASB") issued ASU 2012-03, *Technical Amendments and Corrections* to SEC Sections to amend various SEC sections in the Accounting Standards Codification as a result of (1) the issuance of SEC Staff Accounting Bulletin No. 114; (2) the issuance of SEC Release No. 33-9250; and (3) corrections related to ASU 2010-22, *Technical Corrections to SEC Paragraphs*. The new guidance was effective upon issuance, and the adoption of this guidance did not have an impact on the Company's consolidated financial statements.

3. Grants Receivable

On April 6, 2010 the National Institute of Health (the "NIH") awarded Heat a grant in the amount of $300,000 for the development of certain technology. The project period was from April 15, 2010 to March 31, 2011. At December 31, 2011 and 2010, the receivable from the NIH was $0 and $60,860, respectively. On October 29, 2010 the Company received a grant from the Internal Revenue Service (the "IRS") for reimbursement of qualified investments in a therapeutic discovery project under section 48D of the Internal Revenue Code. The grant was for the amount of $244,479. At December 31, 2011 and 2010, the receivable from the IRS was $0 and $162,435, respectively. There were no grants receivable at September 30, 2012 (unaudited).

4. Discontinued Operations

In April of 2012, the Company's board approved a plan to sell its 92.5% interest in Heat II to a related party entity. On June 25, 2012, the Company sold all of its interest to the related party in exchange for $9,250 in cash and a receivable from Heat II of $296,244. The receivable is due in full approximately seven years from the date of the transaction with interest accruing at a rate of 6% per annum. The Company performed a fair value analysis of the receivable from Heat II and determined that due to the uncertainty surrounding the collectibility of the receivable, the fair value was $0. The Company's estimate of the fair value of the receivable is based upon several factors including the long-term maturity of the receivable, an analysis of Heat II's ability and willingness to pay the receivable given the current financial position, and the fact that Heat II is likely years away from generating product revenues.

The $9,250 in cash was recorded as a reduction to the loss from discontinued operations in the consolidated statement of operations for the nine months ended September 30, 2012. The operations of Heat II through June 25, 2012, including fiscal year 2011 and 2010, and inception to date, are presented in the accompanying consolidated statements of operations as a loss from discontinued operations and on the consolidated balance sheets as liabilities related to discontinued operations.

5. Property and Equipment

Property and equipment consist of the following at:

	Year ended December 31,		Nine months ended September 30,
	2011	2010	2012
			(unaudited)
Computer equipment	$ 3,213	$ -	$ 3,213
Furniture and fixtures	9,000	-	10,780
Less: accumulated depreciation	(624)	-	(2,956)
	$ 11,589	$ -	$ 11,037

Depreciation expense for the year ended December 31, 2012 was $624 and $2,332 for the nine months ended September 30, 2012. There was no depreciation expense during fiscal year 2010.

6. Loan Receivable from Officer

On December 10, 2008, the Company advanced an officer $75,000. As of December 31, 2011 and 2010, the outstanding balance of the loan receivable from the officer was $0 and $6,138, respectively. The loan receivable was paid in full in 2011.

7. Debt Issuance Costs

In connection with the issuance of convertible notes payable, the Company incurred debt acquisition costs in the amount of $39,172. The Company capitalized these costs and amortized them over the life of the note payable, using the effective interest method of amortization. The outstanding notes payable were all converted to preferred stock during the year-ended December 31, 2011 at which time the remaining debt issuance costs related to the issuance of these convertible notes payable were written-off.

In December 2011, the Company recorded $55,890 of debt issuance costs related to the issuance of warrants to purchase Series A Preferred Stock to a lender. The warrants were issued in conjunction with a promissory note issued to the lender. In December 2011, the Company began amortizing the debt issuance costs over the three year term of the promissory note resulting in $883 of interest expense for the year ended December 31, 2011. The note payable associated with the preferred stock warrants was paid in full and terminated during the nine months ended September 30, 2012. The remaining balance of $55,007 was amortized and written off during the nine months ended September 30, 2012.

In August 2012, the Company recorded $31,680 of debt issuance costs related to the issuance of warrants to purchase Series A Preferred Stock to a lender. The warrants were issued in conjunction with a promissory note issued to the lender. At this time, the Company began amortizing the debt issuance costs over the four year term of the promissory note resulting in $1,320 of unaudited interest expense for the nine months ended September 30, 2012. Amortization expense was $25,285 and $13,887 during fiscal year 2011 and 2010, respectively. Accumulated amortization at December 31, 2011 and 2010 was $39,172 and $13,887, respectively. Unaudited amortization expense was $56,327 and $25,285 for the nine month periods ended September 30, 2012 and 2011, respectively. Unaudited accumulated amortization at September 30, 2012 and 2011 was $0.

8. Line of Credit

On July 9, 2008, the Company obtained a Loan and Security Agreement ("Line of Credit") in an amount of up to $250,000 to support working capital requirements. The interest rate was 7% per annum as of December 31, 2010. The loan was personally guaranteed by an executive of the Company by meeting certain funding requirements with the bank. The outstanding balance on the Line of Credit of $249,500 was paid in full during 2010 and the Line of Credit was closed as of December 31, 2010. Interest expense on the Line of Credit during 2010 was $13,390.

9. Convertible Notes Payable

On May 18, 2010, the Company issued a convertible note payable to an investor in the amount of $250,000 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in November 2011; however, the note payable, along with accrued interest of $10,273, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 123,939 shares of preferred stock issued and $260,260 of additional paid-in capital.

On May 24, 2010, the Company issued a convertible note payable to a related party in the amount of $350,000 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in November 2011; however, the note payable, along with accrued interest of $14,210, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 173,433 shares of preferred stock issued and $364,192 of additional paid-in capital.

On September 30, 2010, the Company issued a convertible note payable to a related party in the amount of $576,000 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in March 2012; however, the note payable, along with the accrued interest of $17,279, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 282,514 shares of preferred stock issued and $593,252 of additional paid-in capital.

On May 9, 2011, the Company issued a convertible note payable to a related party in the amount of $425,000 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in November 2012; however, the note payable, along with the accrued interest of $5,029, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 204,776 shares of preferred stock issued and $430,009 of additional paid-in capital.

On June 1, 2011, the Company issued a convertible note payable to a related party in the amount of $100,000 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in December 2012; however, the note payable, along with accrued interest of $993, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 48,092 shares of preferred stock issued and $100,988 of additional paid-in capital.

On August 15, 2011, the Company issued a convertible note payable to a related party in the amount of $922,709 with an interest rate of 3% per annum, accruing monthly. The note is convertible into the Company's Series A Preferred Stock at a price per share of $2.10. The note was scheduled to mature in February 2013; however, the note payable, along with accrued interest of $3,487, was converted to Series A Preferred Stock on September 30, 2011. The conversion resulted in 441,046 shares of preferred stock issued and $926,152 of additional paid-in capital.

Convertible notes payable consisted of the following:

	December 31, 2011	December 31, 2010	September 30, 2012 (unaudited)
Notes payable with an interest rate of 3% per annum, accruing monthly. Notes are convertible into shares of Series A preferred stock at a conversion price of $2.10 per share:			
Note matures March 2013	$ -	$ -	$ -
Note matures March 2012	-	576,000	-
Note matures November 2012	-	-	-
Note matures November 2011	-	350,000	-
Note matures November 2011	-	250,000	-
Note matures October 2019	-	-	80,204
Less current maturities	-	(600,000)	-
Total convertible notes payable, non-current portion	$ -	$ 576,000	$ 80,204

On October 20, 2011, the Company entered into a convertible note agreement with a vendor for an amount up to $950,000. The note accrues 12% simple interest per annum beginning on the day of the first advance. The note is convertible into common or Series A preferred stock at the latest valuation. The type of security converted will depend on whether common or Series A preferred stock is issued as part of a successful future equity raise of at least $7.5 million at the qualified offering price. Unless earlier converted into equity, the note will be payable upon demand after the eighth anniversary of the execution date of the vendor agreement which occurs in October 2019. The agreement allows the vendor to treat unpaid invoices as advances of principal under the promissory note. As of September 30, 2012 (unaudited), the Company has drawn $80,204 on this note agreement. The note matures on October 20, 2019 unless the agreement is terminated earlier or the note is converted to Series A preferred stock or common stock.

Accrued interest on outstanding debt obligations was $0 and $15,166 at December 31, 2011 and 2010, respectively. Unaudited accrued interest on outstanding debt obligations was $4,582 at September 30, 2012.

10. Notes Payable

On December 14, 2011, the Company entered into a loan agreement with the North Carolina Biotechnology Center (the "Center") for an amount up to $250,000 to be used by the Company to develop certain of its proprietary technology and processes as defined by the loan agreement during a one year period ended December 14, 2012. The principal of the loan, plus accrued interest, is due in full on December 14, 2014, with annual installments of 5% of the outstanding balance due on December 14, 2012 and 2013. The loan agreement accrues interest at 4.25% per annum beginning on the day of the first advance. As of December 31, 2011, the outstanding balance was $0 and no draw downs occurred during fiscal year 2011. During the unaudited nine months ending September 30, 2012, the Company drew down $225,000 of the loan. The principal of the loan, including accrued interest, was paid in full in August 2012.

In conjunction with this loan agreement, the Company issued warrants to purchase 29,762 shares of Series A Preferred Stock with an exercise price of $2.10 per share and a expiration date of December 13, 2021. Per the terms of the warrant agreement, the exercise price of $2.10 per share is subject to adjustment if at any time subsequent to the date of the warrant agreement, Preferred Series A shares are issued at a price less than $2.10 per share. The warrants were recorded at fair value as a liability on the Company's consolidated balance sheet on the date of issuance and are revalued as of each balance sheet date. (See Note 12 Preferred Stock Warrants Liability).

On August 7, 2012, the Company and Heat I entered into a loan and security agreement ("the Loan and Security Agreement") with a bank. The terms of the agreement provide for a $1,000,000 term loan ("Tranche A") to be available to the Company and Heat I as of the date of the Loan and Security Agreement. The Tranche A term loan may be increased to $2,775,000 upon the Company receiving grant funding totaling at least $16,000,000. The Tranche A term loan accrues interest monthly at an interest rate of 3% plus Prime or 6% per annum, whichever is greater. The Tranche A term loan principal balance, along with any accrued interest, is to be paid in thirty-six equal monthly installments beginning September 7, 2013 and ending August 7, 2016. As of September 30, 2012, the Company's unaudited outstanding principal balance on the Tranche A term loan was $200,000.

The Loan and Security Agreement provides for another term loan of $1,000,000 ("Trance B") upon the receipt of at least $5,000,000 from the sale or issuance of the Company's equity securities to investors on or before December 15, 2012 ("Tranche B Equity Trigger Event"). The Trance B term loan accrues interest monthly at an interest rate of 3% plus Prime or 6% per annum, whichever is greater. The Tranche B term loan principal balance, along with any accrued interest, is to be paid in equal monthly installments beginning on the 7th day of the month immediately following the 12 month period after the Tranche B Equity Trigger Event and ending August 7, 2016. As of September 30, 2012 (unaudited), the Company has not drawn on the Trance B term loan.

Additionally, the Loan and Security Agreement provides for a term loan in an aggregate principal amount not to exceed $225,000 ("Term Loan B"). Payments of 5% of the outstanding principal balance, plus accrued interest are each due on August 2013 and 2014, with the remaining principal balance, plus all accrued interest, due December 14, 2014. The term loan accrues interest monthly at 4.25% per annum. Proceeds from the $225,000 Term Loan B were used to pay in full the principal balance of the loan with the Center as noted above. As of September 30, 2012 (unaudited), the Company's outstanding principal balance on the Term Loan B was $225,000. At September 30, 2012, the Company was in compliance with certain financial covenants related to this debt agreement.

In conjunction with the Loan and Security Agreement, the Company issued the bank warrants to purchase 17,500 shares of Heat's Series A Preferred Stock. The warrants were issued on August 7, 2012 with an initial exercise price of $2.10 per share and expire on August 7, 2022. The warrants were recorded at fair value as a liability on the Company's consolidated balance sheet on the date of issuance and are revalued as of each balance sheet date. (See Note 12 Preferred Stock Warrants Liability).

As of September 30, 2012 (unaudited), future payments under the Company's notes payable agreements are:

2013	$ 16,806
2014	77,917
2015	269,166
2016	61,111
Total	$ 425,000

11. License Agreements

On July 11, 2008, Heat entered into two agreements with a research university (the "University") to license, from the University, certain technology and processes in various stages of patent pursuit on an exclusive basis for use in its research and development and commercial activities ("License Agreement 03-31, 05-39" and "License Agreement 97-14", or collectively "License Agreements"). Heat has the right to grant sublicenses under the License Agreements.

Heat is also responsible for all patent costs, past and future, associated with the preparation, filing, prosecution, issuance, and maintenance of United States patent applications. Heat is also required to make minimum royalty payments to the University under the terms of the License Agreements.

In connection with the License Agreements, Heat agreed to issue to the University 10% of all issued and outstanding common stock in each class and series on a fully-diluted basis together with rights to participate in future stock offerings.

In April 2009, Heat and the University agreed to amend the original License Agreements of July 11, 2008 to extend the terms of payments. For the additional consideration of $12,500 and additional stock of 2.5% of fully-dilutable shares issued and outstanding for each License Agreement, a revised extension date of August 11, 2009 was granted for all past due license fees and patent costs. Furthermore, the 10% original stock holdings were given assurance of anti-dilution protection until a "Qualified Investment" pursuant to this agreement.

On June 26, 2009, Heat assigned all rights and obligations of License Agreement 03-31, 05-39 and License Agreement 97-14 to its subsidiaries, Heat II and Heat I, respectively. All previous stock ownership and rights of the University to participate in future stock offerings by Heat were mutually terminated. Heat I and Heat II agreed to issue the University 5% of each subsidiary's issued and outstanding common stock in each class and series on a fully-diluted basis, together with fully-dilutable common shares equal to 2.5% of the total number of shares in each class and series issued outstanding. As a result, the University owns 7.5% of Heat I and Heat II's issued and outstanding common stock. For each agreement, the Company agreed to make minimum royalty payments of $10,000 for three years beginning 2010 due on the anniversary date of the agreements. Beginning in 2013, and thereafter for the life of the agreements, the minimum royalty payments shall be $20,000 due on the same date. A milestone payment is due to the University from the Company no later than March 2022 of $400,000 for License Agreement 03-31, 05-39. Another milestone payment is due no later than May 2017 of $250,000 for License Agreement 97-14.

In August 2009, Heat II and the University entered into a second amendment ("Amendment 2") to License Agreement 03-31, 05-39 to extend the foregoing payment due dates for all past due license fees and patent costs.

In August 2009, Heat I and the University entered into a second amendment ("Amendment 2") to License Agreement 97-14 to extend the foregoing payment due dates for all past due license fees and patent costs.

In February 2010, Heat II and the University entered into a third amendment ("Amendment 4") to License Agreement 03-31, 05-39 to grant back to the University a certain non-exclusive license. In all other respects, the original agreement remained the same.

On August 30, 2010, Heat entered into an option agreement with another research university ("University II") to acquire the right to negotiate an exclusive license for certain materials which includes cancer bladder cells and all unmodified derivatives of these cells. An option fee of $2,000 was paid on September 8, 2010 to grant a period of nine months for this consideration. In July 2011, the Company exercised the option to acquire the license for $10,000.

In October 2010, Heat II and the University entered into a fourth amendment ("Amendment 5") to License Agreement 03-31, 05-39 to grant to the licensor a non-exclusive license right for certain technology as research reagents and research tools.

On December 12, 2010, Heat II entered into a similar license agreement ("I-176") with the University for one component of complimentary technology to the July 11, 2008 agreement. Heat II agreed to pay the University a license fee of $50,000 and a reimbursement of $15,797 for past patent fees. Heat II also agreed to make minimum royalty payments of $10,000 for three years beginning 2012 due on the anniversary date of this agreement. Beginning in 2015, and thereafter for the life of the agreement, the minimum royalty payments shall be $20,000 due on the same date with a milestone payment due no later than March 2022 of $650,000.

On February 18, 2011, Heat I entered into a license agreement ("SS114A") with the University to obtain additional technology related to License Agreement 97-14. Heat I agreed to reimburse the University for all past patent costs of $37,381. As partial consideration for the license, Heat II agreed to grant back certain exclusive rights to the University.

On February 18, 2011, Heat I entered into a license agreement ("143") with the University to obtain additional technology related to License Agreement 97-14. In consideration for the license, Heat I agreed to pay the University a fee of $50,000 and reimburse them for past patent costs of $14,158.

On February 18, 2011, Heat I entered into a license agreement ("J110") with the University to obtain additional technology related to License Agreement 97-14. In consideration for the license, Heat I agreed to pay the University a fee of $10,000 and reimburse them for past patent costs of $1,055.

On February 18, 2011, Heat I entered into a license agreement ("D-107") with the University to obtain additional technology related to License Agreement 97-14.

On April 12, 2011, Heat entered into a non-exclusive evaluation and biological material license agreement with a not-for-profit corporation for evaluation and production of vaccines. In consideration for the evaluation and commercial use license, Heat agreed to pay the not-for-profit corporation a fee of $5,000 and $50,000, respectively. Heat has the option to renew the license once the original term has expired. Milestone payments are due upon certain events agreed upon by Heat and the not-for-profit corporation.

At December 31, 2011, Heat owed the University approximately $160,000 in unpaid license fees. At September 30, 2012, Heat owed the University approximately $162,000 in unpaid license fees.

Future minimum royalty payments are as follows:

Year ended December 31,

2012	$ 30,000
2013	50,000
2014	50,000
2015	60,000
2016	60,000
Thereafter	760,000
Total	$ 1,010,000

12. Preferred Stock Warrants Liability

The summary of warrant activity for the years ended December 31, 2011 and 2010 and nine months ended September 30, 2012 is as follows:

	Number of Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2010	-	$ -	-	$ -
Granted	-	-	-	-
Exercised	-	-	-	-
Forfeited/cancelled	-	-	-	-
Outstanding at December 31, 2010	-	$ -	-	-
Granted	29,762	$ 2.10	9.9	$ 1.88
Exercised	-	-	-	-
Expired/cancelled	-	-	-	-
Outstanding at December 31, 2011	29,762	$ 2.10	9.9	$ 1.91
Granted, (unaudited)	17,500	$ 2.10	9.9	$ 1.81
Exercised, (unaudited)	-	-	-	-
Expired/cancelled, (unaudited)	-	-	-	-
Outstanding at September 30, 2012, (unaudited)	47,262	$ 2.10	9.4	$ 1.78

The aggregate intrinsic value of the preferred stock warrants in the table above is $0.00 at December 31, 2011 and at September 30, 2012. The aggregate intrinsic value is before applicable income taxes and is calculated based on the difference between the exercise price of the warrants and the estimated fair market value of the Company's Series A Preferred Stock as of the respective dates.

13. Stockholders' Deficit

Authorized Capital

Heat authorized 2,112,500 and 1,000,000 shares of preferred stock (par value $0.0001) as of December 31, 2011 and 2010, respectively. Of the 2,112,500 preferred stock shares authorized, 2,000,000 are designated as Series A and 112,500 as Series 1. Of the Series A Preferred Stock, 1,347,255 and 112,500 are issued and outstanding as of December 31, 2011 and 2010, respectively and 1,863,128 are issued and outstanding as of September, 30, 2012 (unaudited). In April 2011, Heat reclassified and substituted 112,500 Series A preferred shares for Series 1 preferred shares. An amended and restated Certificate of Incorporation was filed. All of the original rights and preferences of the Series A were transferred to the Series 1 preferred stock. Of the Series 1 preferred stock, 112,500 and 0 are issued and outstanding as December 31, 2011 and 2010, respectively. Of the Series 1 preferred stock, 112,500 are issued and outstanding as of September 30, 2012 (unaudited).

Heat authorized 50,000,000 and 10,000,000 shares of common stock (par value $0.0001) as of December 31, 2011 and 2010, respectively. Of the 50,000,000 common stock shares, 4,879,926 are issued and 4,203,114 and 4,131,017 outstanding as December 31, 2011 and 2010, respectively. Of the 50,000,000 common stock shares, 4,879,962 and 4,218,114 are issued and outstanding, respectively, as of September 30, 2012 (unaudited).

Preferred Stock

Series 1

Heat has designed the following rights and preferences to the Series 1 preferred stock holders: a) dividends equal to those paid to common stockholders on an as converted basis, b) vote on matters presented to the common shareholders based on an as converted basis, c) requires any merger or acquisition to obtain a majority vote of the preferred stockholders, d) provides conversion rights to the holders at $2.35 per share into common stock, unless Heat issues common stock below the conversion price, then the preferred stock conversion price will be reduced to the current offer price, e) upon Heat closing a qualified offering of $10,000,000 or upon the occurrence of an event approved by the vote of 67% of the preferred members, the preferred shares will be mandatorily convertible into shares of common stock and all shares converted will be retired and cannot be reissued, and f) participate equally with the Series A preferred stockholders upon liquidation.

Series A

Heat has designed the following rights and preferences to the Series A preferred stock holders: a) dividends equal to those paid to common stockholders on an as converted basis, b) vote on matters presented to the common shareholders based on an as converted basis, c) requires any merger or acquisition to obtain a majority vote of the preferred stockholders, d) provides conversion rights to the holders at $2.10 per share into common stock, unless Heat issues common stock below the conversion price, then the preferred stock conversion price will be reduced to the current offer price, e) upon Heat closing a qualified offering of $10,000,000 or upon the occurrence of an event approved by the vote of 67% of the preferred members, the preferred shares will be mandatorily convertible into shares of common stock and all shares converted will be retired and cannot be reissued, and f) participate equally with the Series 1 preferred stockholders upon liquidation.

Non-cash Consideration for Rent

Non-cash consideration for rent represents office space and other utilities provided by an unrelated entity on behalf of the Company during the years ended December 31, 2008 through December 31, 2010. No cash was transferred for the utilization of the space. The fair market value of the non-cash consideration was calculated using market rental rates and the square footage of office space provided.

Equity Compensation Plan

2009 Stock Incentive Plan

In 2009, the Company adopted the 2009 Stock Option Plan of Heat Biologics, Inc. (the “2009 Plan”), under which stock options to acquire 500,000 common shares could be granted to key employees, directors, and independent contractors. Under the 2009 Plan, both incentive and non-qualified stock options could be granted under terms and conditions established by the Board of Directors. The exercise price for incentive stock options was the fair market value of the related common stock on the date the stock option was granted. Stock options granted under the 2009 Plan generally have terms of 10 years and have various vesting schedules.

The Company amended the 2009 Stock Option Plan and all related addendum agreements in April 2011. This second amendment increased the number of shares available for issuance from 500,000 to 1,500,000. As of December 31, 2011 and 2010, there were 1,085,344 and 330,219 and stock options outstanding under the 2009 Plan, respectively. As of September 30, 2012 and 2011, there were 1,237,064 and 935,469 and stock options outstanding under the 2009 Plan, respectively.

The following table summarizes the components of the Company's stock-based compensation included in net loss:

	Years ended December 31,		Nine months ended September 30, (unaudited)	
	2011	**2010**	**2012**	**2011**
Employee stock options	$ 51,686	$ 3,270	$ 45,047	$ 40,016
Non-employee stock options	11,324	6,910	30,983	6,863
Restricted stock awards	16,540	20,611	4,950	15,141
Total	$ 79,550	$ 30,791	$ 80,980	$ 62,020

Stock Options

The Company granted options in 2012, 2011, and 2010. The fair market value of the stock options at the date of grant was estimated using the Black-Scholes option-pricing model with the following assumptions:

	Year ended December 31,		Nine months ended September 30, (unaudited)	
	2011	2010	**2012**	2011
Risk-free interest rate	0.71 - 1.16%	2.19 - 2.45%	0.73 – 0.88%	0.83 – 1.25%
Expected volatility	70%	75%	70%	70%
Expected life (years)	3.5 - 6.25	5.5 - 6.25	5.0 - 6.0	3.5 - 6.25
Expected dividend yield	0%	0%	0%	0%

The risk-free interest rate is based on U.S. Treasury interest rates at the time of the grant whose term is consistent with the expected life of the stock options. The Company used an average historical stock price volatility based on an analysis of reported data for a peer group of comparable companies that have issued stock options with substantially similar terms, as the Company did not have any trading history for its common stock. Expected term represents the period that the Company's stock option grants are expected to be outstanding. The Company elected to utilize the "simplified" method to value stock option grants. Under this approach, the weighted-average expected life is presumed to be the average of the vesting term and the contractual term of the option.

Expected dividend yield was considered to be $0 in the option pricing formula since the Company had not paid any dividends and had no plans to do so in the future. The forfeiture rate was considered to be none insofar as the historical experience of the Company is very limited. As required by ASC 718, the Company will adjust the estimated forfeiture rate based upon actual experience.

The Company recognized stock compensation expense of $63,010 and $10,180 for the years ended December 31, 2011 and 2010, respectively for the Company's stock option awards. The Company recognized stock compensation expense of $80,980 and $62,020 for the nine months ended September 30, 2012 and 2011, respectively for the Company's stock option awards.

The following tables summarize the stock option activity as of December 31, 2011 and 2010 and September 30, 2012:

	Shares	Weighted Average Exercise Price
Outstanding at January 1, 2010	150,219	$ 0.30
Granted	180,000	0.21
Exercised	-	-
Expired/cancelled	-	-
Options at December 31, 2010	330,219	$ 0.25
Granted	768,250	0.29
Exercised	-	-
Expired/cancelled	(13,125)	0.28
Options at December 31, 2011	1,085,344	$ 0.28
Granted, (unaudited)	233,595	0.33
Exercised, (unaudited)	-	-
Expired/cancelled, (unaudited)	(81,875)	0.01
Options at September 30, 2012, (unaudited)	1,237,064	$ 0.29

The weighted average grant date fair value of stock options granted during the years ended December 31, 2011 and 2010 and the nine months ended September 30, 2012 was $0.16, $0.14, and $0.19, respectively.

The following table summarizes information about stock options outstanding at December 31, 2011:

Options Outstanding			Options Exercisable		
Balance as of December 31, 2011	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Balance as of December 31, 2011	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price
1,085,344	8.70	$0.28	513,938	8.31	$0.30

As of December 31, 2011, the unrecognized stock-based compensation expense related to unvested stock options was approximately $99,000, which is expected to be recognized over a weighted average period of approximately 27 months.

The aggregate intrinsic value of stock options outstanding and exercisable at December 31, 2011 was $41,990 and $28,576, respectively. This amount is before applicable income taxes and represents the market price of the Company's common stock at December 31, 2011 less the grant price, multiplied by the number of stock options that had a grant price that is less than the market price. This amount represents the amount that would have been received by the optionees had these stock options been exercised on that date. During the years ended December 31, 2011 and 2010, the aggregate intrinsic value of stock options exercised was zero.

The following table summarizes information about stock options outstanding at September 30, 2012 (unaudited):

Options Outstanding			Options Exercisable		
Balance as of September 30, 2012	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Balance as of September 30, 2012	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price
1,237,064	8.35	$0.31	973,408	8.30	$0.31

As of September 30, 2012, the unrecognized stock-based compensation expense related to unvested stock options was approximately $45,680, which is expected to be recognized over a weighted average period of approximately 26 months.

The aggregate intrinsic value of stock options outstanding and exercisable at September 30, 2012 was $60,010 and $45,161, respectively. This amount is before applicable income taxes and represents the market price of the Company's common stock at September 30, 2012 less the grant price, multiplied by the number of stock options that had a grant price that is less than the market price. This amount represents the amount that would have been received by the optionees had these stock options been exercised on that date. During the years ended September 30, 2012 and 2011, the aggregate intrinsic value of stock options exercised was zero.

A summary of the activity of the Company's unvested stock options is as follows:

	Options	Weighted Average Grant Date Fair Value
Balance at December 31, 2010	214,667	$ 0.16
Granted	768,250	0.16
Vested	(398,385)	0.16
Forfeited	(13,125)	0.18
Balance at December 31, 2011	571,407	$ 0.17
Granted, (unaudited)	233,595	0.19
Vested, (unaudited)	(514,678)	0.18
Forfeited, (unaudited)	(81,875)	0.28
Balance at September 30, 2012, (unaudited)	208,449	$ 0.22

The total fair value of shares vested for the years ended December 31, 2011 and 2010 was $63,010 and $10,180, respectively. The total fair value of shares vested for the years ended September 30, 2012 and 2011 was $91,291 and $47,038, respectively.

Restricted Stock

The following table summarizes restricted stock option activity at December 31, 2011 and 2010 and September 30, 2012:

	Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2010	196,911	$ 0.21
Granted	-	-
Vested	(98,147)	0.21
Cancelled	-	-
Unvested at December 31, 2010	98,764	$ 0.21
Granted	-	-
Vested	(72,098)	0.23
Cancelled	-	-
Unvested at December 31, 2011	26,666	$ 0.28
Granted, (unaudited)	-	-
Vested, (unaudited)	(15,000)	0.28
Cancelled, (unaudited)	-	-
Unvested at September 30, 2012, (unaudited)	11,666	$ 0.28

At December 31, 2011 and September 30, 2012, the unrecognized stock-based compensation expense related to unvested restricted stock was approximately $7,467 and $3,850, respectively which is expected to be recognized over a weighted average period of approximately sixteen and seven months, respectively.

Common Stock Warrants

On March 10, 2011 the Company issued warrants to purchase 75,000 shares of common stock to non-employee placement agents in consideration for a private equity placement transaction. The warrants have an exercise price of $0.21 per share and expire 10 years from the issuance date. The fair market value of the warrants was calculated on the grant date based on the Black-Scholes-Merton option pricing model, and the Company recorded $12,434 of stock issuance costs for the year ended December 31, 2011.

14. Income Taxes

The components of income tax expense (benefit) attributable to continuing operations are as follows:

Year Ended December 31,	**2011**	**2010**
Current expense:		
Federal	$ -	$ -
State	-	-
Deferred expense (benefit):		
Federal	$ -	$ -
State	-	-
Total	$ -	$ -

The differences between the Company's consolidated income tax expense attributable to continuing operations and the expense computed at the 35% United States statutory income tax rate were as follows:

Year Ended December 31,	**2011**	**2010**
Federal income tax expense at statutory rate	$ (718,468)	$ (245,427)
State and local income taxes, net of federal benefit	(93,678)	(26,015)
Non-deductible expenses	18,692	1,759
Increase in valuation allowance	793,454	269,683
	$ -	$ -

The income tax effects of temporary differences from continuing operations that give rise to significant portions of deferred income tax assets (liabilities) are presented below:

December 31,	**2011**	2010
Deferred tax assets:		
Net operating loss carryforward	$ 1,299,322	$ 516,981
Other	26,505	15,385
Valuation allowance	(1,325,827)	(532,366)
Deferred income taxes	$ -	$ -

During 2011, the Company's valuation allowance increased by $793,454 at December 31, 2011. This increase was primarily due to the generation of additional net operating loss carryforwards.

The Company has approximately $6,806,122 of federal and state operating loss carryforwards which begin to expire in 2023 through 2031.

The Company files income tax returns in the United States federal jurisdiction and various state jurisdictions. The Company is subject to examination by taxing authorities for the tax years ended December 31, 2008 through 2011.

15. Commitments

In January 2011, the Company entered into a twelve month lease agreement for office space commencing on January 1, 2011. The monthly base rent was $3,500. The Company cancelled the lease as of July 2011, when operations moved to North Carolina. Rent expense, net of sublease rental income of $2,750, related to this lease was $22,250 for 2011, which includes base rent of $24,500 and a $500 cancellation fee.

In November 2011, the Company entered into a thirteen month lease agreement for office space commencing on January 1, 2012. The monthly base rent is $3,870, which commences February 1, 2012. The lease term may be extended for an additional 24 months on substantially the same terms. Future minimum lease payments for the years ended December 31, 2012 and 2013, under the above commitment, are $42,572 and $3,870, respectively.

In connection with the convertible note agreement entered into on October 20, 2011 with a vendor for an amount up to $950,000, the Company is required use the vendor exclusively for the manufacture and supply of the material for the Company's Phase III clinical trials and commercialization efforts.

16. Related Party Transactions

In 2008, the Company advanced $75,000 to an executive. At December 31, 2011 and 2010, the outstanding balance on the loan receivable was $0 and $6,138, respectively.

In 2010, the Company issued convertible notes in the aggregate principal amount of $926,000 to an investor, the managing member of which is a member of the Company's Board of Directors. In 2011, the Company issued additional convertible notes in the aggregate principal amount of $1,347,709 to the same investor. In September 2011, all of the convertible notes were converted into 1,101,769 shares of Series A Preferred Stock.

From inception through fiscal year 2010, an executive of the Company contributed office space and other utilities to the Company with an estimated fair value of $15,624, of which $5,760 was contributed during fiscal year 2010.

The Chairman of the Company's Scientific and Clinical Advisory Board was paid $43,750 and $31,250 in consulting fees in 2011 and 2010, respectively. The Chairman was paid $15,625 in consulting fees through September 2012.

During the year ended December 31, 2011, the Company paid $50,000 to a member of its Scientific and Clinical Advisory Board, $26,000 to a member of management, and $50,000 to a shareholder, all for consulting services.

The Company had a related party payable balance of $12,371 and $9,979 as of December 31, 2011 and 2010, respectively.

In April 2010, a related party entity advanced the Company $12,500. Interest is calculated on the outstanding balance annually at 3.25%. As of December 31, 2011 and 2010, the outstanding balance was $12,500. At December 31, 2011 and 2010, accrued interest on this payable was $686 and $280, respectively. As of September 30, 2012

(unaudited), the outstanding balance was $12,500. At September 30, 2012 (unaudited), accrued interest on this payable was $991.

In June 2012, the Company sold its 92.5% ownership interest in Heat II to a related party in exchange for $9,250 in cash and a receivable of $296,224 to be paid in full in seven years from the date of the purchase. Interest accrues on the receivable at a rate of 6% per annum. At September 30, 2012, the Company had related party receivable from this entity for $6,241 related to invoices received by the Company pertaining to expenses of Heat II incurred subsequent to the sale of Heat II. This amount is also recorded in the Company's accounts payable as of September 30, 2012.

See additional related party transactions in Note 6, Loan Receivable from Officer; Note 9, Convertible Notes Payable; and Note 13, Stockholders' Deficit.

17. Net Loss per Common Share

Basic net loss per common share is computed by dividing net loss by the weighted average number of common shares outstanding during the periods. Fully diluted net loss per common share is computed using the weighted average number of common and dilutive common equivalent shares outstanding during the periods. Common equivalent shares consist of stock options that are computed using the treasury stock method.

For the years ended December 30, 2012 and 2011 and the nine months ended September 30, 2012 (unaudited), all of the Company's common stock options and warrants, preferred stock, and preferred stock warrants are antidilutive and therefore have been excluded from the diluted calculation.

18. Subsequent Events

On May 30, 2012, the Company's board authorized the formation of two subsidiaries, Heat Biologics III, Inc. (Heat III) and Heat Biologics IV, Inc. (Heat IV), although they were not incorporated until October 1, 2012, in the state of Delaware. The companies are authorized to issue 10,000,000 shares of common stock with a par value of $0.001. To date there has been no activity in either subsidiary.

On November 30, 2012, the Company signed a First Amendment to its Loan and Security Agreement (the "First Amendment") as discussed in Footnote 10 – Notes Payable which waives the Company's default on the related covenants, as of November 1, 2012. In order to receive additional funding from the bank in conjunction with the Loan and Security Agreement, the Company was required to obtain a term sheet from investors acceptable to the bank for the sale or issuance of the Company's equity securities, with net cash proceeds to be received by the Company prior to December 15, 2012 of at least $5,000,000. As the Company did not obtain the term sheet by the required date, the waiver was obtained, but as a result of the default, the Company is unable to further borrow from the bank until a future milestone, as defined in the First Amendment, regarding additional funding is met.

PA RT II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

We estimate that expenses in connection with the distribution described in this registration statement (other than brokerage commissions, discounts or other expenses relating to the sale of the shares by the selling security holders) will be as set forth below. We will pay all of the expenses with respect to the distribution, and such amounts, with the exception of the Securities and Exchange Commission ("SEC") registration fee, are estimates.

SEC registration fee	$
Accounting fees and expenses	
Legal fees and expenses	
Printing and related expenses	
Transfer agent fees and expenses	
Miscellaneous	
Total	$

Item 14. Indemnification of Directors and Officers.

Pursuant to our Restated Certificate of Incorporation, our Board of Directors may issue additional shares of common or preferred stock. Any additional issuance of Common Stock or the issuance of preferred stock could have the effect of impeding or discouraging the acquisition of control of us by means of a merger, tender offer, proxy contest or otherwise, including a transaction in which our stockholders would receive a premium over the market price for their shares, and thereby protects the continuity of our management. Specifically, if in the due exercise of its fiduciary obligations, the Board of Directors was to determine that a takeover proposal was not in our best interest, shares could be issued by the Board of Directors without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover by:

- diluting the voting or other rights of the proposed acquirer or insurgent stockholder group;
- putting a substantial voting block in institutional or other hands that might undertake to support the incumbent board of directors; or
- effecting an acquisition that might complicate or preclude the takeover.

The Delaware Corporations and Associations Act ("Delaware Corporate Law"), with certain exceptions, permits a Delaware corporation to indemnify a present or former director or officer of the corporation (and certain other persons serving at the request of the corporation in related capacities) for liabilities, including legal expenses, arising by reason of service in such capacity if such person shall have acted in good faith and in a manner he reasonably believed to be in, or not opposed, to the best interests of the corporation, and in any criminal proceeding if such person had no reasonable cause to believe his conduct was unlawful. However, in the case of actions brought by or in the right of the corporation, no indemnification may be made with respect to any matter as to which such director or officer shall have been adjudged liable, except in certain limited circumstances.

Our Restated Certificate of Incorporation provides that we shall indemnify our directors and executive officers to the fullest extent now or hereafter permitted by Delaware Corporate Law. The indemnification provided by Delaware Corporate Law and our Restated Certificate of Incorporation is not exclusive of any other rights to which a director or officer may be entitled. The general effect of the foregoing provisions may be to reduce the circumstances under which an officer or director may be required to bear the economic burden of the foregoing liabilities and expense.

We may also purchase and maintain insurance for the benefit of any director or officer that may cover claims for which we could not indemnify such person.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the "Securities Act") may be permitted to our directors, officers and controlling persons, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

In the event that a claim for indemnification against such liabilities is asserted by one of our directors, officers, or controlling persons in connection with the securities being registered, we will, unless in the opinion of our legal counsel the matter has been settled by controlling precedent, submit the question of whether such indemnification is against public policy to court of appropriate jurisdiction. We will then be governed by the court's decision.

Item 15. Recent Sales and Issuances of Unregistered Securities.

In August 2012, we issued a warrant to a lender exercisable for 17,500 shares of our Series A Preferred Stock. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In April 2012, May 2012, October 2012, and December 2012 we issued options exercisable for an aggregate of 411,095 shares of our Common Stock at an exercise price of $0.33 per share to six individuals and two entities for services rendered. The issuance qualified for exemption under Section 4(2) of the Securities Act since the issuance by the Company did not involve a public offering. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In December 2011, we issued a warrant exercisable for 29,762 shares of our Series A Preferred Stock to an investor in connection with a loan. The warrant is exercisable for a period of ten years at a price per share of $2.10, contains a cashless exercise feature and contains a weighted average price adjustment feature. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In December 2011, we issued 73,455 shares of Series A Preferred Stock to one investor for a purchase price of $2.10 per share and aggregate proceeds of $154,256. The issuance qualified for exemption under Section 4(2) of the Securities Act since the issuance by the Company did not involve a public offering. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In October and November 2011, we issued options exercisable for an aggregate of 163,000 shares of our Common Stock at an exercise price of $0.28 per share to three individuals for services rendered. The issuance qualified for exemption under Section 4(2) of the Securities Act since the issuance by the Company did not involve a public offering. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In September 2011, one investor converted the outstanding debt owed to him that was evidenced by a convertible note into 123,939 shares of Common Stock. The issuance qualified for exemption under Section 3(a)(9) of the Securities Act.

In September 2011, one investor converted the outstanding debt owed to him that was evidenced by a convertible note into 48,092 shares of Common Stock. The issuance qualified for exemption under Section 3(a)(9) of the Securities Act.

In September 2011, one investor converted the outstanding debt owed to him that was evidenced by four convertible notes into 1,101,769 shares of Common Stock. The issuance qualified for exemption under Section 3(a)(9) of the Securities Act.

In August 2011, May 2011, September 2010 and May 2010 we issued to one investor a convertible promissory note in the principal amounts of $922,709, $425,000, $576,000 and $350,000, respectively, which was subsequently converted into 1,101,769 shares of preferred stock. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In June 2011 we issued a convertible promissory note in the principal amount of $100,000 to one investor, which was subsequently converted into 48,092 shares of preferred stock. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In March and April 2011, we issued options exercisable for an aggregate of 590,250 shares of our Common Stock at an exercise price of $0.28 and $0.31 per share to ten individuals for services rendered. The issuance qualified for exemption under Section 4(2) of the Securities Act since the issuance by the Company did not involve a public offering. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In March 2011, we granted warrants exercisable for an aggregate of 75,000 shares of our Common Stock to 5 individuals for services rendered in connection with a placement agency agreement we had with Paramount BioCapital, a company no longer in existence. The warrants are exercisable at $0.21 per share, vested immediately upon exercise and expire on March 21, 2021. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In September and November 2010, we issued options exercisable for an aggregate of 180,000 shares of our Common Stock at exercise prices of $0.21 per share to ten individuals for services rendered. The issuance qualified for exemption under Section 4(2) of the Securities Act since the issuance by the Company did not involve a public offering. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

In May 2010, we issued one convertible promissory note to one investor in the principal amount of $250,000, which was subsequently converted into 123,939 shares of preferred stock. The issuance was not a public offering as defined in Section 4(2) because the offer and sale was made to an insubstantial number of persons and because of the manner of the offering. In addition, the investors had the necessary investment intent as required by Section 4(2) since they agreed to, and received, certificates bearing a legend stating that such options and the underlying shares are restricted. This restriction ensured that these securities will not be immediately redistributed into the market and therefore be part of a public offering. This issuance was done with no general solicitation or advertising by the Company. Based on an analysis of the above factors, the Company met the requirements to qualify for exemption under Section 4(2) of the Securities Act for the transactions.

Item 16. Exhibits.

Exhibit No.	Description
1.1	Underwriting Agreement between Heat Biologics, Inc. and Aegis Capital Corp
3.1	Articles of Incorporation filed on June 10, 2008*
3.2	Bylaws*
3.3	Amended and Restated Articles of Incorporation filed on October 16, 2009*
3.4	Second Amended and Restated Articles of Incorporation filed on December 16, 2011*
4.1	2009 Stock Option Agreement*
4.2	First Amendment to 2009 Stock Option Agreement*
4.3	Second Amendment to 2009 Stock Option Agreement*
4.4	Warrant issued to Square 1 Bank *
4.5	Warrant issued to North Carolina Biotechnology Center *
5.1	Opinion
10.1	License Agreement (J-110) between the University of Miami and Heat Biologics, Inc. effective February 18, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.2	License Agreement (97-14) between the University of Miami and Heat Biologics, Inc. effective July 11, 2008 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.3	License Agreement (143) between the University of Miami and Heat I, Inc. effective February 11, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.4	License Agreement (D-107) between the University of Miami and Heat I, Inc. effective February 18, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.5	License Agreement (SS114A) between the University of Miami and Heat I, Inc. effective February 18, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.6	Promissory Note with NC Biotech dated December 14, 2011*
10.7	Loan Agreement with NC Biotech dated December 14, 2011*
10.8	Subscription Agreement*
10.9 ++	Employment Agreement Jeffrey Wolf dated December 18, 2009*
10.10	Amendment to Employment Agreement Jeffrey Wolf dated as of January 1, 2011*
10.11	Lease with Europa Center dated as of November 18, 2011*
10.12	Non-Exclusive Evaluation and Biological Material License Agreement with American Type Culture Collection effective April 12, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.13	Manufacturing Services Agreement with dated as of October 20, 2011(Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.14	Assignment and Assumption Agreement *
10.15	Termination Agreement UM97-114 dated June 26, 2009 *
10.16	Loan and Security Agreement Square 1 Bank dated August 7, 2012*
10.17	Convertible Promissory Note(Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.18	Amendment to License Agreement (UM97-14) dated April 29, 2009*
10.19	Amendment to Loan and Security Agreement with Square 1 Bank*
10.20	Second Amendment to License Agreement (UMSS-114) dated August 11, 2009*
10.21	Exclusive License between Heat Biologics, Inc. and the University of Michigan dated July 22, 2011 (Portions of the exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions have been filed with the Commission)*##
10.22	Biological Materials License Agreement dated October 1, 2011 by and between Val-Chum Limited Partnership, Heat Biologics, Inc and Centre Hospitalier De L'Universite De Montreal*##
10.23	Lease Modification Agreement*
23.1	Consent of BDO USA, LLP
24.1	Power of Attorney (included in signature page)

*Filed Herewith

Confidential treatment has been requested as to certain portions of this exhibit.

++ Denotes management contract

Item 17. Undertakings

A. Rule 415 Offering

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed on the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of the securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

B. Request for Acceleration of Effective Date

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Chapel Hill, State of North Carolina, February 12, 2013.

HEAT BIOLOGICS, INC.

By: */s/ Jeffrey Wolf*
Name: Jeffrey Wolf
Title: Chairman, Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)

EXHIBIT 3.1

State of Delaware
Secretary of State
Division of Corporations
Delivered 09:24 AM 06/l0/2008
FILED 09:34 AM 06/10/2008
SRV 080677192 - 4559175 FILE

CERTIFICATE OF INCORPORATION

FIRST: The name of this corporation shall be: HEAT BIOLOGICS, INC.

SECOND: Its registered office in the State of Delaware is to be located at 2711 Centerville Road, Suite 400, Wilmington, County of New Castle, Delaware, 19808. The name of its registered agent at such address is Corporate Agents, Inc..

THIRD: The purpose or purposes of the corporation shall be:

To engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock, which this corporation is authorized to issue, is One Hundred Million (100,000,000) shares of common stock with a par value of $0.0001.

FIFTH: The name and address of the incorporator is as follows:

Corporate Agents, Inc.
2711 Centerville Road
Suite400
Wilmington, Delaware 19808

SIXTH: The Board of Directors shall have the power to adopt, amend or repeal the by-laws

SEVENTH: No director shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty by such director as a director. Notwithstanding the foregoing sentence, a director shall be liable to the extent provided by applicable law, (i) for breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. No amendment to or repeal of this Article Seventh shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment.

IN WITNESS WHEREOF, the undersigned, being the incorporator herein before named, has executed signed and acknowledged this certificate of incorporation this 1Oth day of June, 2008.

Corporate Agents, Inc., Incorporator

By: /s/ Katrina Smith
Name: Katrina Smith
Assistant Secretary

EXHIBIT 3.2

BYLAWS

OF

HEAT BIOLOGICS, INC.,

A DELAWARE CORPORATION

June 10, 2008

BYLAWS

OF

HEAT BIOLOGICS, INC.

ARTICLE I
OFFICES

Section 1.1. Principal Office. The principal office of Heat Biologics, Inc. (the "**Company**") shall be located in such place as is designated by the Board.

Section 1.2. Registered Office. The registered office of the Company required by law to be maintained in the State of Delaware may be, but need not be, identical with the principal office.

Section 1.3. Other Offices. The Company may have offices at such other places, either within or without the State of Delaware, as the Board may from time to time determine or as the affairs of the Company may require.

ARTICLE II
MEETINGS OF STOCKHOLDERS

Section 2.1. Place of Meetings. All meetings of stockholders shall be held at the principal office of the Company or at such other place, either within or without the State of Delaware, as shall determined by the Board (the "**Board**"). The Board may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided by Section 211(a)(2) of the Delaware General Corporation Law (the "DGCL").

Section 2.2. Annual Meeting. An annual meeting of stockholders shall be held for the election of Directors at such date and time as may be designated by resolution of the Board from time to time. Any other proper business may be transacted at the annual meeting. The Company shall not be required to hold an annual meeting of stockholders, provided that (i) the stockholders are permitted to act by written consent under the Certificate of Incorporation of the Company (the "**Certificate of Incorporation**") and these Bylaws, (ii) the stockholders take action by written consent to elect Directors and (iii) the stockholders unanimously consent to such action or, if such consent is less than unanimous, all of the directorships to which Directors could be elected at an annual meeting held at the effective time of such action are vacant and are filled by such action.

Section 2.3. Special Meetings. A special meeting of the stockholders may be called at any time by the Board, the Chairperson of the Board, the Chief Executive Officer or the President (in the absence of a Chief Executive Officer). If any person(s) other than the Board calls a special meeting, the request shall: (i) be in writing; (ii) specify the time of such meeting and the general

nature of the business proposed to be transacted; and (iii) be delivered personally or sent by registered mail or by facsimile transmission to the Chairperson of the Board, the Chief Executive Officer, the President (in the absence of a Chief Executive Officer) or the Secretary of the Company. The officer(s) receiving the request shall cause notice to be promptly given to the stockholders entitled to vote at such meeting, in accordance with the provisions of Section 2.4 of these Bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting. No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in the paragraph of this Section 2.3 shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board may be held.

Section 2.4. Notice of Stockholders' Meetings. All notices of meetings of stockholders shall be sent or otherwise given in accordance with either Section 2.5 or Section 8.5 of these Bylaws not less than 10 or more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, if any, date and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

Section 2.5. Manner of Giving Notice; Affidavit of Notice. Notice of any meeting of stockholders shall be given:

(a) if mailed, when deposited in the United States mail, postage prepaid, directed to the stockholder at his or her address as it appears on the Company's records; or

(b) if electronically transmitted as provided in Section 8.5 of these Bylaws.

An affidavit of the Secretary or an Assistant Secretary of the company or of the transfer agent or any other agent of the Company that the notice has been given by mail or by a form of electronic transmission, as applicable, shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 2.6. Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, at each meeting of stockholders the presence in person or by proxy of the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote at the meeting shall be necessary and sufficient to constitute a quorum. If, however, such quorum is not present or represented at any meeting of the stockholders, then either: (i) the chairperson of the meeting; or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, in the manner provided in Section 2.7 of these Bylaws, until a quorum is present or represented. The stockholders at a meeting at which a quorum is present may continue to do business until adjournment, notwithstanding the withdrawal of sufficient stockholders to leave3 less than a quorum.

Section 2.7. Adjourned Meeting; Notice. Any meeting of stockholders, annual or special, may adjourn from time to time to reconvene at the same or some other place, and notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote

communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Company may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 2.8. Conduct of Meetings.

(a) Chairperson of the Meeting. Meetings of stockholders shall be presided over by the Chairperson of the Board, if any, or in the Chairperson's absence by the Vice Chairperson of the Board, if any, or in the Vice Chairperson's absence by the Chief Executive Officer (if one has been duly elected), or in the Chief Executive Officer's absence by the President, or in the President's absence by a Vice President, or in the absence of all of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen by vote of the stockholders at the meeting. The Secretary shall act as secretary of the meeting, but in the Secretary's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

(b) Rules and Procedures. The board may adopt by resolution such rule, regulations and procedures for the conduct of any meeting of stockholders as it shall deem appropriate including, without limitation, such guidelines and procedures as it may deem appropriate regarding the participation by means of remote communication of stockholders and proxyholders not physically present at a meeting. Except to the extent inconsistent with such rules, regulation and procedures as adopted by the Board, the chairperson of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairperson, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the chairperson of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as shall be determined: (iv) restriction on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board or the chairperson of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

Section 2.9. List of Stockholders Entitled to Vote. The officer of the Company who has charge of the stock ledger of the Company shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Company shall not be required to include the electronic mail address or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least 10 days prior to the meeting; (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of

the meeting; or (ii) during ordinary business hours, at the Company's principal executive office. In the event that the Company determines to make the list available on an electronic network, the Company may take reasonable steps to ensure that such information is available only to stockholders of the Company. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. The stock ledger shall be the only evidence as to who are stockholders entitled to examine the list of stockholders or the books of the Company, or to vote in person or by proxy at any meeting of stockholders and of the number of shares held by each such stockholder.

Section 2.10. Voting.

(a) Except as may be otherwise provided in the Certificate of Incorporation, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of capital stock held by such stockholder which has voting power upon the matter in question.

(b) At all meetings of stockholders for the election of directors a plurality of the votes cast shall be sufficient to elect. All other elections and questions shall, unless otherwise provided by law, the Certificate of Incorporation or these Bylaws, be decided by the vote of the holders of shares of stock having a majority of the votes which could be cast by the holders of all shares of stock entitled to vote thereon which are present in person or represented by proxy at the meeting.

(c) Voting at meetings of stockholders need not be by written ballot and, unless otherwise required by law, need not be conducted by inspectors of election unless so determined by the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote thereon which are present in person or by proxy at such meeting. If authorized by the Board, the requirement of a written ballot for the election of Directors shall be satisfied by a ballot submitted by electronic transmission (as defined in Section 8.5 of these Bylaws), provided that any such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder or proxy holder.

(d) Shares of its own stock owned by the Company, directly or indirectly, through a subsidiary or otherwise, shall not be voted and shall not be counted in determining the total number of shares entitled to vote; provided, however, that shares held in a fiduciary capacity may be voted and shall be counted to the extent provided by law.

Section.2.11. Record Date for Stockholder Notice; Voting; Giving Consents . In order that the Company may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or

exchange of stock or for the purpose of any other lawful action, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which record date:

(i) in the case of determination of stockholders entitled to notice of or to vote at any meeting of stockholders or adjournment thereof, shall, unless otherwise required by law, not be more than 60 nor less than 10 days before the date of such meeting;

(ii) in the case of determination of stockholders entitled to express consent to corporate acting in writing without a meeting, shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board; and

(iii) in the case of determination of stockholders for any other action, shall not be more then 60 days prior to such other action.

If no record date is fixed by the Board:

(i) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held;

(ii) the record date for determining stockholders entitled to express consent to corporate action in writing without a meeting when no prior action of the Board is required by law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Company in accordance with applicable law, or, if prior action by the Board is required by law, shall be at the close of business on the day on which the Board adopts the resolution taking such prior action; and

(iii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting,provided, however, that the Board may fix a new record date for the adjourned meeting.

Section 2.12. Proxies. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

Section 2.13. Stockholder Action by Written Consent Without a Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted by the DGCL to be taken at any annual or special meeting of the stockholders of a corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed and dated by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Such signed and dated consent much be delivered to the Company, whether done before or after the action so taken, but in no event later than 60 days after the earliest dated consent delivered in accordance with Section 228 of the DGCL. When corporate action is taken without a meeting by less than unanimous written consent, prompt notice shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting, if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Company as provided in Section 228 of the DGCL. In the event that the action which is consented to is such as would have required the filing of a certificate under any provision of the DGCL, if such action had been voted on by stockholders at a meeting thereof, the certificated filed under such provision shall state, in lieu of any statement required by such provision concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the DGCL.

ARTICLE III
DIRECTORS

Section 3.1. General Powers. Subject to the provisions of the DGCL and any limitations in the Certificate of Incorporation or these Bylaws related to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the Company shall be managed by or under the direction of the Board.

Section 3.2. Number, Term and Qualification.

(a) Number of Directors. Except as otherwise provided in the Certificate of Incorporation, the number of Directors which shall constitute the whole Board of Directors shall be determined from time to time by resolution of the Board, provided, that the Board shall consist of at least one member. No reduction of the authorized number of Directors shall have the effect of removing any Director before that Director's term of office otherwise expires.

(b) Term of Office. Each Director shall hold office until such Director's death, resignation, retirement, removal, disqualification, or such Director's successor is elected and qualifies.

(c) Qualification. Directors need not be residents of the State of Delaware or stockholders of the Company.

Section 3.3. Election of Directors. Except as provided in the Certificate of Incorporation or inSection 3.5 of these Bylaws and unless Directors are elected by written consent in lieu of an annual meeting, the Directors shall be elected at each annual meeting of stockholders. Those persons who receive the highest number of votes shall be deemed to have been elected. Unless

otherwise provided in the Certificate of Incorporation, election of Directors shall be by written ballot, voice vote or such other means as permitted by law.

Section 3.4. Removal; Resignation.

(a) Removal. Unless otherwise restricted by statute, the Certificate of Incorporation or these Bylaws, any Director or the entire Board may be removed from office, with or without cause, by a vote of stockholders holding a majority of the outstanding shares entitled to vote an election of Directors. If a Director is elected by the holders of any class or classes of stock or series thereof, only such stockholders may participate in the vote to remove that Director. If any Directors are so removed, new Directors may be elected at the same meeting.

(b) Resignation. Any Director may resign by delivering a resignation in writing or by electronic transmission to the Company. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later time or upon the happening of some later event.

Section 3.5. Vacancies. Unless otherwise provided in the Certificate of Incorporation or these Bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of Directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the Directors then in office, although less than a quorum, or by a sole remaining Director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more Directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the Directors elected by such class or classes or series thereof then in office, or by the sole remaining Director so elected.

A Director elected to fill a vacancy shall be elected for the unexpired term of such Director's predecessor in office.

If at any time, by reason of death or resignation or other cause, the company should have no Directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the Certificate of Incorporation or these Bylaws, or may apply to the court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the Directors then in office constitute less than a majority of the whole Board (as constituted immediately prior to any such increase), then the court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the total number of the shares at the time outstanding having the right to vote for such Directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the Directors chosen by the Directors then

in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

Section 3.6. Compensation. The Board may provide for the compensation of Directors for their services as such and may provide for the payment of any and all expenses incurred by the Directors in connection with such services.

Section 3.7. Committees.

(a) Establishment; Composition of Committees. The Board, by resolution adopted by a majority of the Directors then in office, may designate one or more committees, each committee to consist of one or more of the Directors of the Company. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any member or any such committee may be removed at any time with or without cause by resolution adopted by a majority of the Board.

(b) Powers of Committees. Any such committee, to the extend provided in the resolution of the Board or these Bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Company, and may authorize the seal of the Company to be affixed to all papers which may require it; but no such committee shall have the power or authority to: (i) adopt, amend or repeal any bylaw of the Company; or (ii) approve or adopt, or recommend to the stockholders any action or matter expressly required by the DGCL to be submitted to stockholders for approval.

(c) Meetings and Action of Committees. Meeting and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(i) Section 4.1 (Place of Meetings; Meetings by Telephone);

(ii) Section 4.2 (Regular Meetings);

(iii) Section 4.4 (Special Meetings);

(iv) Section 4.5 (Notice of Meetings);

(v) Section 4.6 (Quorum)

(v) Section 4.8 (Board Action by Written Consent Without a Meeting); and

(vi) Section 9.3 (Waiver of Notice)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the Board and its membersprovided, however:

(i) the time of regular meetings of committees may be determined either by resolution of the Board or by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the Board or by resolution of the committee; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE IV
MEETINGS OF DIRECTORS

Section 4.1. Place of Meetings; Meetings by Telephone. The Board may hold meetings, both regular and special, either within or outside the State of Delaware. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or any committee,. By means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence at the meeting.

Section 4.2. Conduct of Business. Meetings of the Board shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in the absence of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 4.3. Regular Meetings. Regular meetings of the Board may be held at such time and place as shall be determined from time to time by the Board.

Section 4.4. Special Meetings. Special meetings of the Board for any purpose or purposes may be called at any time by the Chairperson of the Board, the Chief Executive Officer, the President, the Secretary or any two Directors.

Section 4.5. Notice of Meetings.

(a) Regular Meetings. Regular meetings of the Board may be held without notice.

(b) Special Meetings. Notice of the time and place of special meetings shall be:

(1) delivered personally by hand, by courier or by telephone;

(ii) sent by United States first-class mail, postage prepaid;

(iii) sent by facsimile; or

(iv) sent by electronic mail,

directed to each Director at that Director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the Company's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the Director. The notice need not specify the place of the meeting (if the meeting is to be held at the Company's principal executive office) nor the purpose of the meeting.

Section 4.6. Quorum. A majority of the Directors in office immediately before the meeting shall constitute a quorum for the transaction of business at any meeting of the Board. If a quorum is not present at any meeting of the Board, then the Directors present thereat my adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

Section 4.7. Manner of Acting.

(a) The act of a majority of the Directors then in office shall be the act of the Board, unless a greater number is required by law. The Certificate of Incorporation, or a bylaw adopted by the stockholders.

(b) A Director of the Company. Who is present at a meeting of the Board at which action on any corporate matter is taken, shall be presumed to have assented to the action taken unless such Director's contrary vote is recorded or such Director's dissent is otherwise entered in the minutes of the meeting or unless he or she shall file such Director's written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary of the Company immediately after the adjournment of the meeting. Such right of dissent shall not apply to a Director who voted in favor of such action.

Section 4.8. Board Action By Consent Without a Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws. Any action required or permitted to be taken at any meeting of the Board. Or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission. And the writing or writings or electronic transmission of transmissions are filed with the minutes of proceedings of the Board or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

ARTICLE V
OFFICERS

Section 5.1. Officers. The officers of the Company shall be a President and a Secretary. The company may also have, at the discretion of the Board, a Chairperson of the Board, a Vice Chairperson of the Board, a Chief Executive Officer, one or more Vice Presidents, a Chief Financial Officer, a Treasurer. One or more Assistant Treasurers, one or more Assistant Secretaries, and any such other officers as may be appointed in accordance with the provisions of these Bylaws. Any number of offices may be held by the same person.

Section 5.2. Appointment; Term. The Board shall appoint the officers of the Company, except such officers as may be appointed in accordance with the provisions of Sections 5.3 and 5.2 of these Bylaws, subject to the rights, if any, of an officer under any contract of employment. Each officer shall hold office until such officer's death, resignation, retirement, removal, disqualification, or until such officer's successor is elected and qualifies,. Unless a different term is specified in the resolution of the Board appointing such officer.

Section 5.3. Subordinate Officers. The Board may appoint, or empower the chief Executive Officer or, in the absence of a Chief Executive Officer, the President, to appoint, such other officers and agents as the business of the Company may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the Board may from time to time determine.

Section 5.4. Removal and Resignation of Officers.

(a) Removal. Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board at any regular or special meeting of the Board or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

(b) Resignation. Any officer may resign at any time by giving written notice to the Company. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Company under any contract to which the officer is a party.

Section 5.5. Vacancies in Office. Any vacancy occurring in any office of the Company shall be filled by the Board or as provided inSection 5.2 of these Bylaws.

Section 5.6. Representation of Shares of Other Corporations. Unless otherwise directed by the Board, the President or any other person authorized by the board or the President is authorized to vote, represent and exercise on behalf of the Company all rights incident to any and all shares of any other corporation or corporations standing in the name of the Company. The authority

granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

Section 5.7. Authority and Duties of Officers. Except as otherwise provided in these Bylaws, the officers of the company shall have such powers and duties in the management of the Company as may be designated from time to time by the Board and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

ARTICLE VI
CERTIFICATES FOR SHARES AND OTHER TRANSFERS

Section 6.1. Stock Certificates; Partly Paid Shares. The shares of the company shall be represented by certificates,provided, however, that the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Company. Notwithstanding the adoption of such a resolution by the Board, every holder stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the company by the Chairperson of the Board or Vice-Chairperson of the Board, or the President or any Vice President of the Company, and by the Secretary, Assistant Secretary, Treasurer or assistant Treasurer of the Company representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile or may be engraved or printed or omitted if the certificate is countersigned by a transfer agent, or registered by a registrar, other than the Company itself or an employee of the Company. In case any officer, transfer agent or registrar who signed or whose facsimile signature has been placed upon such certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Company with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue. The certificates shall be consecutively numbered or otherwise identified; and the name and address of the persons to whom they are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the Company.

The Company may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the Company in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the company shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

Section 6.2. Transfer of Shares. Transfer of shares shall be made on the stock transfer books of the Company only upon surrender of the certificates for the shares sought to be transferred by the record holder thereof or by such holder's duly authorized agent, transferee or legal representative. All certificates surrendered for transfer shall be canceled before new certificates for the transferred shares shall be issued.

Section 6.3. Restrictions on Transfer.

(a) S-Corp Preservation. If the Company has elected Subchapter S status under Section 1362 of the Internal Revenue code of 1986, as amended, no stockholder or involuntary transferee shall dispose of or transfer any shares of the Company which such stockholder now owns or may hereafter acquire if such disposition or transfer would result in the termination of such Subchapter S status. Unless such disposition or transfer is consented to by all stockholders of the Company. Any such disposition or transfer that does not comply with the terms of this Section 6.3(a) shall be void and have no legal force or effect and shall not be recognized on the share transfer books of the Company as effective.

(b) Right of First Refusal. No stockholder or involuntary transferee shall dispose of or transfer any shares of the Company which such stockholder now owns or may hereafter acquire except as set forth in this Section 6.3(b). Any purported transfer or disposition of shares in violation of the terms of this Section 6.3(b) shall be void and the Company shall not recognize or give any effect to such transaction.

i. An individual stockholder shall be free to transfer, during such stockholder's life time or by testamentary transfer, any or all of such stockholder's shares of the Company to such stockholder's spouse, any of such stockholder's children, grandchildren or direct lineal descendants, whether by blood or by adoption, spouses of such issue, parents, siblings, or direct lineal descendents, whether by blood or by adoption, of such siblings, domestic partner sharing the same household, university or charitable organization or a trust or family limited partnership for the sole benefit of those person or any of them, a Section 501(c)(3) organization or a non-profit foundation or other non-profit organization/ and a stockholder which is a partnership, corporation or limited liability company shall be free to transfer any or all of its shares of the Company to its partners, stockholders or members, respectively, if there is no consideration for such transfer/ but, in case of any such transfer, the transferee shall be bound by all the terms of this provision and no further transfer of such shares shall be made by such transferee except back to the stockholder who originally owned them or except in accordance with the provisions of this Section 6.3(b).

ii. Any stockholder or transferee who wishes to transfer all or any part of such stockholder's shares of the Company (hereinafter "Offeror"), other than as permitted in Section 6.3(b)(i) above, first shall submit a writer offer to sell such shares to the Company at the same price per share and upon the same terms and conditions offered by a bona fide prospective purchaser of such shares. Such written offer to the Company shall continue to be a binding offer to sell until: (1) rejected by the Company; or (2) the expiration of a period of 30 days after delivery of such written offer to the Company, whichever shall first occurs.

iii. Every written offer submitted in accordance with the provisions of this Section 6.3(b) shall specifically name the person to whom the Offeror intends to transfer the shares, the number of shares which such Offeror intends so to transfer to each person and the price per share and other terms upon which each intended transfer is to be made. Upon the termination of all such written offers, the Offeror shall be free to transfer, for a period of 3 months thereafter, any unpurchased shares to the persons so named at the price per share and upon the other terms and conditions so named, provided that any such transferee of those shares shall thereafter be bound by all the provisions of these Bylaws.

iv. Every written offer submitted to the Company shall be deemed to have been delivered when delivered to the principal office of the Company or if and when sent by prepaid certified mail, or delivered by hand to the President of the Company at the principal office of the Company.

v. If any consideration to be received by the Offeror for the shares offered is property other than cash, then the price per share shall be measured to the extent of the fair market value of such noncash consideration.

vi. The provisions contained herein shall not apply to the pledge of any shares of the Company as collateral for a loan but shall apply to the sale or other disposition of shares under any such pledge.

vii. The provision of this Section 6.3(b) may be waived with respect to any transfer either by the Company, upon duly authorized action by the Board, or by the stockholders, upon the written consent of the holders of at least a majority of the voting power of the Company (excluding the votes represented by those share to be transferred by the Offeror).

viii. In the event of any conflict between the terms of this Section 6.3(b) and any written agreement between the Company and any stockholder of the Company, the terms of such written agreement shall control, and the provisions of this Section shall not be applicable.

ix. The restrictions set forth in this Section 6.3(b) shall terminate upon the closing of a public offering of securities of the Company registered under the Securities Act of 1933, as amended.

x. Every certificate representing shares of the company shall bear the following legend in substantially the following form prominently displayed:

"THE SHARES REPRESENTED BY THIS CERTIFICATE, AND THE TRANSFER THEREOF, ARE SUBJECT TO THE RESTRICTION ON TRANSFER PROVISIONS FO THE BYLAWS OF THE COMPANY, A COPY OF WHICH IS ON FILE IN, AND MAY BE EXAMINED AT, THE PRINCIPAL OFFICE OF THE COMPANY."

Section 6.4. Lost Certificates. The officers of the Company may authorize the issuance of a new share certificate in place of a certificate claimed to have been lost or destroyed, upon receipt of an affidavit of such fact from the person claiming the loss or destruction. When authorizing such issuance of a new certificate, the officers of the Company may require the claimant to give the Company a bond in such sum as it may direct to indemnify the company against loss from any claim with respect to the certificated claimed to have been lost or destroyed, or otherwise to indemnify the Company against such loss.

Section 6.5. Holder of Record. The Company may treat as absolute owner of the shares the person in whose name the shares stand of record on its books just as if that person had full competency, capacity, and authority to exercise all rights of ownership irrespective of any knowledge or notice to the contrary or any description indicating a representative, pledge or other

fiduciary relation or any reference to any other instrument or to the rights of any other person appearing upon its record or upon the share certificate; except that any person furnishing to the Company proof of his/her appointment as a fiduciary shall be treated as if he or she were the holder of record of the Company's shares.

Section 6.6. Treasury Shares. Treasury shares of the Company shall consist of such shares as have been issued and thereafter acquired but not canceled by the Company. Treasury shares shall not carry voting or dividend rights, except rights in share dividends.

ARTICLE VII
INDEMNIFICATION AND REIMBURSEMENT OF DIRECTORS AND OFFICERS

Section 7.1. Indemnification for Expenses and Liabilities. Any person who at any time serves or has served: (i) as a Director, officer, employee or agent of the Company; (ii) at the request of the Company as a Director, officer, partner, trustee, employee or agent of another foreign or domestic corporation, partnership, joint venture, trust, or other enterprise; or (iii) at the request of the Company as a trustee or administrator under an employee benefit plan, or is called as a witness at a time when he or she has not been made a named defendant or respondent to any Proceeding, shall have a right to be indemnified by the Company to the fullest extent permitted by the DGCL against all Liability (as defined) and Expenses (as defined) in any Proceeding (as defined) (including without limitation a Proceeding brought by or on behalf of the Company itself) arising out of his or her status as such or activities in any of the foregoing capacities.

The Board shall take all such action as may be necessary and appropriate to authorize the Company to pay the indemnification required by the Article VII, including, without limitation, to the extent required, making good faith evaluation of the manner in which the claimant for indemnity acted and of the reasonable amount of indemnity due him or her.

Any person who at any time serves or has served in any of the aforesaid capacities for or on behalf of the Company shall be deemed to be doing or to have done so in reliance upon, and as consideration for, the rights provided for herein. Any repeal or modification of the indemnification provisions shall not affect any rights or obligations existing at the time of such repeal or modification. The rights provided for herein shall inure to the benefit of the legal representatives of any such person and shall not be exclusive of any other rights to which such person may be entitled apart from this provision.

The rights granted herein shall not be limited by the provisions contained in Section 145 of the DGCL or any successor to such statute.

Section 7.2. Advance Payment of Expenses. The Company shall (upon receipt of an undertaking by or on behalf of the Director, officer, employee or agent involved to repay the Expenses described herein unless it shall ultimately be determined that he or she is entitled to be indemnified by the Company against such Expenses) pay Expenses incurred by such Director, officer, employee or agent in defending a Proceeding or appearing as a witness at a time when he

or she has not been named as a defendant or a respondent with respect thereto in advance of the final disposition of such Proceeding.

Section 7.3. Insurance. The Company shall have the power to purchase and maintain insurance (on behalf of any person who is or was a Director, officer, employee or agent of the Company, or is or was serving at the request of the company as a Director, officer, employee or agent of another domestic or foreign corporation, partnership, joint venture, trust or other enterprise or as a trustee or administrator under an employee benefit plan) against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the company would have the power to indemnify him or her against such liability.

Section 7.4. Definitions. The following terms as used in this Article shall have the following meanings, "**Proceeding**" means any threatened, pending or completed action, suit, or proceeding and any appeal therein (and any inquiry or investigation that could lead to such action, suit, or proceeding), whether civil, criminal, administrative, investigative or arbitrative and whether formal or informal. "**Expenses**" means expenses of every kind, including counsel fees. "**Liability**" means the obligation to pay a judgment, settlement, penalty, fine (including an excise tax assessed with respect to an employee benefit plan), reasonable expenses incurred with respect to a Proceeding, and all reasonable expenses incurred in enforcing the indemnification rights provided herein. "**Director**," "**officer**," "**employee**" and "**agent**" include the estate or personal representative of a Director, officer, employee or agent. "Company" shall include any domestic or foreign predecessor of this Company in a merger or other transaction in which the predecessor's existence ceased upon consummation of the transaction.

ARTICLE VIII
GENERAL PROVISIONS

Section 8.1. Dividends. The Board, subject to any restriction contained in either: (i) the DGCL; or (ii) the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property, or in shares of the Company's capital stock.

The Board may set apart out of any of the funds of the Company available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Company, and meeting contingencies.

Section 8.2. Seal. The corporate seal shall be in such form as may be approved from time to time by the Board. Such seal may be an impression or stamp and may be used by the officers of the Company by causing it, or a facsimile thereof, to be impressed or affixed or in any other manner reproduced. In addition to any form of seal adopted by the Board, the officers of the Company may use as the corporate seal a seal in the form of a circle containing the name of the Company and the state of its incorporation (or an abbreviation thereof) on the circumference and the word "Seal" in the center.

Section 8.3. Waiver of Notice. Whenever notice is required to be given to any stockholder or Director under the provisions of the DGCL, the Certificate of Incorporation or these Bylaws, a written waiver, signed by the person or persons entitled to notice, or a waiver by electronic transmission by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except, when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, Directors, or members of a committee of Directors need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the Certificate of Incorporation or these Bylaws.

Section 8.4. Fiscal Year. The fiscal year of the Company shall be determined by the Boards.

Section 8.5. Notice by Electronic Transmission. Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the Certificate of Incorporation or these Bylaws, any notice to stockholders given by the Company under any provision of the DGCL, the Certificate of Incorporation or these Bylaws shall be effective if given by a form of electronic transmission consent to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Company. Any such consent shall be deemed revoked if:

(i) the company is unable to deliver by electronic transmission two consecutive notices given by the Company in accordance with such consent; and

(ii) such inability becomes known to the Secretary or an Assistant Secretary of the Company or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iv) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Company that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Notwithstanding the foregoing, notice by a form of electronic transmission shall not apply to Sections 164, 296, 311, 312 or 324 of the DGCL.

An "**electronic transmission**" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Section 8.6. Records and Reports.

(a) Maintenance and Inspection of Records. The company shall, either at its principal executive office or at such place or places as designated by the Board, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the Company's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent so to act on behalf of the stockholder. The demand under oath shall be directed to the Company at its registered office in Delaware or at its principal executive office.

(b) Inspection by Directors. Any Director shall have the right to examine the Company's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his or her position as a Director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a Director is entitled to the inspection sought. The Court may summarily order the company to permit the Director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

Section 8.7. Amendments. Except as otherwise provided herein, these Bylaws may be amended or repealed and new Bylaws may be adopted by the affirmative vote of the holders of a majority of the voting power of the Company, or, if the Certificate of Incorporation so permits, by the affirmative vote of a majority of the Directors then holding office at any regular or special meeting of the Board or by unanimous written consent.

Section 8.8. All terms used in these Bylaws shall be deemed to refer to the masculine, feminine, neuter, singular or plural as the context may require.

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THIS IS TO CERTIFY that the above Bylaws were duly adopted by the Board, effective as of the date first set forth above.

/s/ Jeffrey Wolf
Jeffrey Wolf
Secretary

Heat Biologics, Inc.
Bylaws
- Signature Page -

Delaware
The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "HEAT BIOLOGICS, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2009, AT 4:08 O'CLOCK, P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

/s/ Jeffrey W. Bullock
Jeffrey W. Bullock, Secretary of State

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090943055

[SEAL]

AUTHENTICATION: 7591927

DATE: 10-20-09

You may verify this certificate online
At corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 05:00 PM 10/16/2009
FILED 4:08 PM 10/16/2009
SRV 090943055 – 4559175 FILE

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
HEAT BIOLOGICS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Heat Biologics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law"**),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Heat Biologics, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on June 10, 2008 under the name Heat Biologics, Inc.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Heat Biologics, Inc. (the **"Corporation"**).

SECOND: The address of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

THIRD The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 10,000 shares of Common Stock, $0.0001 par value per share (**"Common Stock"**), and (ii) 1,000,000 shares of Preferred Stock, $0.001 par value per share (**"Preferred Stock"**).

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding share of capital stock of the Corporation entitled to vote, irrespective of the provisions of Sections 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

1,000,000 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated **"Series A Preferred Stock"** with the following rights, preferences, powers, privileges and restrictions, qualifications and limitation. Unless otherwise indicated, references to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series A Preferred Stock then outstanding shall first receive, or simultaneously receive , a dividend on each outstanding share of Series A Preferred Stock in an amount at least equal to (i) in the case of a dividend on common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series A Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of common Stock issuable upon conversion of a share of Series A Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series A Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Series A Original Issue Price (as defined below); provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series A Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest: Series A Preferred Stock dividend. The **"Series A Original Issue Price"** shall mean

$2.35 per share, subject to appropriate adjustments in the event of any stock dividend, stock split; combination or other similar recapitalization with respect to the Series A Preferred Stock.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales

2.1 Payments to Holders of Series A Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series A Original Issue Price, plus any dividends declared by unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution or winding up (the amount payable pursuant to this sentence is hereinafter referred to as the **"Series A Liquidation Amount"**). If upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Series A Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment of all preferential amounts required to be paid to the holders of shares of Series A Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events

2.3.1 Definition. Each of the following events shall be considered a **"Deemed Liquidation Event"** unless the holders of at least a majority of the outstanding shares of Series A Preferred Stock elect otherwise by written notice sent to the Corporation prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock

that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger of consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger of consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger of consolidation on the same terms as the actual outstanding shares of common Stock are converted or exchanged); or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the **"Merger Agreement"**) provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a Redemption Notice (as defined below) not later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Series A Preferred Stock, and (ii) if the holders of at least a majority of the then outstanding shares of Series A Preferred Stock so requires in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders (the **"Available Proceeds"),** to the extent legally available therefor, on the 150th day after such Deemed Liquidation Event, to redeem all outstanding shares of Series A Preferred Stock at a price per share equal to the Series A Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Series A Preferred Stock, the Corporation shall redeem a pro rata portion of each holder's shares of Series A Preferred Stock to the fullest extent of such

Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the corporation has funds legally available therefor. If the Redemption Notice shall have been duly given, and the redemption price payable upon redemption of the shares of Series A Preferred Stock to be redeemed is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, the notwithstanding that the certificates evidencing any of the shares of Series A Preferred Stock so called for redemption shall have not been surrendered, all rights with respect to such shares shall forthwith after the redemption date terminate, except only the right of the holders to receive the redemption price without interest upon surrender of their certificate or certificates therefor. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

A **"Redemption Notice"** shall mean a written notice of the mandatory redemption to each holder of record of Series A Preferred Stock stating: (i) the number of shares of Series A Preferred Stock held by the holder that the company shall redeem; (ii) the redemption date and price to be paid for each share of Series A Preferred Stock; (iii) the date upon which the holder's right to convert such shares terminates; and (iv) that the holder is to surrender to the company, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series A Preferred Stock to be redeemed.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash of the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Series A Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Series A Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Series A Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The holders of record of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation, the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation, and the holders of record of a majority of the shares of the Common Stock and a majority of the shares of the

Preferred Stock, each voting as a separate class, shall be entitled to elect two (2) directors of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose of pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Series A Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Series A Preferred Stock Protective Provisions. At any time when shares of Series A Preferred Stock or Common Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock and the holders of at least a majority of the then outstanding shares of Common Stock, given in writing or by vote at a meeting, each consenting or voting (as the case may be) separately as a class:

(a) liquidate, dissolve or wind up the business and affairs of the Corporation, effect any Deemed Liquidation Event, or consent to any of the foregoing;

(b) amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws;

(c) create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class of series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation and the payment of dividends, or increase the authorized number of shares of Series A Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation and the payment of dividends;

(d) (i) reclassify, alter or amend, any existing security of the Corporation that is pari passu with the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation or the payment of dividends, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock in respect of any such right, preference or privilege, or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution, or winding up of the Corporation or the payment of dividends, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series A Preferred Stock in respect of any such right, preference or privilege; or

(e) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series A Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock, (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then current fair market value thereof or (iv) as approved by the Board.

4. Optional Conversion.

The holders of the Series A Preferred Stock shall have conversion rights as follows (the **"Conversion Rights"**)

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Series A Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series A Original Issue Price by the Series A Conversion Price (as defined below) in effect at the time of conversion. The **"Series A Conversion Price"** shall initially be equal to $1.25. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series A Preferred Stock.

4.2 Fractional Shares. No fractional shares of common Stock shall be issued upon conversion of the Series A Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable

Upon such conversion shall be determined on the basis of the total number of shares of Series A Preferred Stock the holder is at the time converting into common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Series A Preferred Stock to voluntarily convert shares of Series A Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of Series A Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Series A Preferred Stock (or at the principal office of the corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Series A Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder of his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the **"Conversion Time"**), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (i) issue and deliver to such holder of Series A Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Series A Preferred Stock represented by the surrendered certificate that were not converted into common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Series A Preferred Stock converted.

4.3.2 Reservations of Shares. The Corporation shall at all times when the Series A Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Series A Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Series A Preferred Stock; and if at any time the number of authorized but unissued shares of common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series A Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Series A Conversion Price below the then par value of

the shares of Common Stock issuable upon conversion of the Series A Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Series A conversion Price.

4.3.3 Effect of Conversion. All shares of Series A Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.42 and to receive payment of any dividends declared but unpaid thereon. Any shares of Series A Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series A Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series A conversion Price shall be made for any declared but unpaid dividends on the Series A Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Series A Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Series A Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Series A Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) **"Series A Original Issue Date"** shall men the date on which the first share of Series A Preferred Stock was issued.

(c) **"Convertible Securities"** shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) **"Additional Shares of Common Stock"** shall mean all shares of Common Stock issued (or, pursuant toSubsection 4.4.3 below, deemed to be issued) by

the Corporation after the Series A Original Issue Date, other than (1) the following shares of common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, **"Exempted Securities"**):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Series A Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation; or

(vi) shares of common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation; or

(vii) shares of Common Stock, Options or convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided, that such issuances are approved by the Board of Directors of the Corporation; or

(viii) shares of common Stock, Options or convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation.

4.4.2 No Adjustment of Series A Conversion Price. No adjustment in the Series A Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series A Original Issue Date shall issue any Options or convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Series A Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Series A Conversion Price computed upon the original issue of such Option or convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Series A Conversions Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Series A Conversion Price to an amount which exceeds the lower of (i) the Series A Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or convertible Security, or (ii) the Series A conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such

Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Series A conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) or the Additional Shares of common Stock subject thereto was equal to or greater than the Series A Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series A Original Issue Date), are revised after the Series A Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security)to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Series A Conversion Price pursuant to the terms of Subsection 4.4.4, the Series A Conversion Price shall be readjusted to such Series A Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of share of common Stock issuable upon the exercise, conversion and/or exchange of any Option or convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Series A Conversion Price provided for in the Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Series A Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Series A Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

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4.4.4 Adjustment of Series A Conversion Price Upon Issuance of Additional Shares of Common Stock . In the event the Corporation shall at any time after the Series A Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Series A Conversion Price in effect immediately prior to such issue, then the Series A Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C)$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Series A Conversion Price in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the Series A Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Series A Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of the Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) Insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) Insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) In the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options

(ii) The maximum number of shares of common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Series A Conversion Price pursuant to the terms of Subsection 4.4.4 then, upon the final such issuance, the Series A Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the

date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series A Original Issue Date effect a subdivision of the outstanding Common Stock, the Series A Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion or each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series A Original Issue Date combine the outstanding shares of common Stock, the Series A Conversion Price in effect immediately before the combination shall be proportionately increased to that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series A Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Series A Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Series A Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record dates, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Series A Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Series A Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Series A Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series A Preferred Stock had been converted into Common Stock on the date of such event.

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4.7 Adjustment for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series A Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Series A Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Series A Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc.. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Series A Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Series A Preferred Stock shall thereafter be convertible in lieu of the common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Series A Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Series A Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Series A Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Series A Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series A Conversion Price pursuant to this Section 4, the Corporation at tis expense shall, as promptly as reasonably practicable, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Series A Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Series A Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Series A Preferred Stock (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Series A Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Series A Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) The Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Series A Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Series A Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Series A Preferred Stock) shall be entitled to exchange their shares of common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Series A Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $10,000,000 of proceeds to the Corporation or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least 66 2/3% of the then outstanding shares of Series A Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as **"The Mandatory Conversion Time"**), (i) all outstanding shares of Series A Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Series A Preferred Stock shall be sent written notice of the Mandatory Conversion time and the place designated for mandatory conversion of all such shares of Series A Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Series A Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so

required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized, in writing. All rights with respect to the Series A Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Tie e(notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Series a Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Series A Preferred Stock converted. Such converted Series A Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series A Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Series A Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Series A Preferred Stock following redemption.

7 Waiver. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the shares of Series A Preferred Stock then outstanding.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Series A Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the corporation shall be determined in the manner set forth in the Bylaws of the Corporation. As of the effective date of this Amended and Restated Certificate of Incorporation, the Board shall be divided into three classes, Class I, Class II and Class III, which shall be as nearly equal in number as possible. Each director shall serve for a term ending on the date of the third annual meeting following the annual meeting at which such

director was elected; provided, however that the initial term of office of directors shall be as follows:

(i) Class I shall expire at the annual meeting of stockholders held in 2010
(ii) Class II shall expire at the annual meeting of stockholders held in 2011; and
(iii) Class III shall expire at the annual meeting of stockholders held in 2012.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: No member of the Board shall have personal liability arising out of an action whether by or in the right of the Company or otherwise for monetary damages for breach of fiduciary duty as a member of the Board; provided, however, that the foregoing shall not limit or eliminate the liability of a member of the Board (i) for any breach of such member's duty of loyalty to the company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL or any successor provision, (iv) for any transaction from which such member of the Board derived an improper personal benefit, or (v) acts or omissions occurring prior to the date of the effectiveness of this provision.

Furthermore, notwithstanding the foregoing provision, if the DGCL is amended or enacted to permit further limitation or elimination of the personal liability of the director, the personal liability of the members of the Board shall be limited or eliminated to the fullest extent permitted by applicable law.

This provision shall not affect any provision permitted under the DGCL, in this Certificate of Incorporation, or in the Bylaws or any contract or resolution of the company indemnifying or agreeing to indemnify a member of the Board against personal liability. Any repeal or modification of this provision shall not adversely affect any limitation hereunder on the personal liability of any member of the Board with respect to acts or omissions occurring prior to such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders of disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

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* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

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IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 16th day of October 2009.

By: /s/ Jeffrey Wolf
Jeffrey Wolf, Chief Executive Officer

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DELAWARE
The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ACCACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "HEAT BIOLOGICS, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF DECEMBER, A.D. 2011, AT 1:26 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

/s/ Jeffrey W. Bullock
Jeffrey W. Bullock, Secretary of State

4559175 8100
111302680

[SEAL]

AUTHENTICATION: 9235902

DATE: 12-16-11

You may verify this certificate online
At corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 01:30 PM 12/16/2011
Filed 02:26 PM 12/16/2011
SRV 111302680 - 4559175 FILE

SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF HEAT BIOLOGICS, INC.

(Pursuant to Sections 2424 and 245 of the
General Corporation Law of the State of Delaware)

Heat Biologics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the **"General Corporation Law"**),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Heat Biologics, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on June 10, 2008 under the name Heat Biologics, Inc.

2. That the Board of directors duly adopted resolutions proposing to amend and restate the Amended and Restated Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Heat Biologics, Inc. (the **"Corporation"**).

SECOND: The address of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, in the City of Wilmington, County of New Castle, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 50,000,000 shares of Common Stock, $0.0001 par value per share (**"Common Stock"**), and (ii) 2,112,500 shares of Preferred Stock, $0.0001 par value per share **("Preferred Stock"**).

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. **General**. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. **Voting.** The holders of the common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Second Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

112,500 shares of the Preferred Stock are hereby designated **"Series 1 Preferred Stock"** and 2,000,000 shares of the Preferred Stock are hereby designated **"Series A Preferred Stock"**, each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, reference to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Second Amended and Restated Certificate of Incorporation) the holders of the Series A Preferred Stock and the holders of the Series 1 Preferred Stock then outstanding shall first receive, or simultaneously receive, on a *pari passu* basis, a dividend on each outstanding share of Series A Preferred Stock and Series 1 Preferred Stock in an amount at least equal to (i)) in the case of a dividend on common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series A Preferred Stock or Series 1 Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of Common Stock issuable upon conversion of a share of Series A Preferred Stock or Series 1 Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series A Preferred Stock or Series 1 Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class of series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class of series) and (B) multiplying such fraction by an amount equal to the applicable Original Issue Price (as defined below); provided that, if the corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of

capital stock of the Corporation, the dividend payable to the holders of Series A Preferred Stock and Series 1 Preferred Stock pursuant to thisSection 1 shall be calculated based upon the dividend on the class of series of capital stock that would result in the highest Series A Preferred Stock and Series 1 Preferred Stock dividend. The **"Series 1 Original Issue Price"** shall mean $2.35 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series 1 Preferred Stock. The **"Series A Original Issue Price:"** shall mean $2.10, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock. Each of the Series 1 Original Issue Price and the Series A Original Issue Price shall be referred to herein as an **"Original Issue Price"**.

2. Liquidation, dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Payments to Holders of Preferred Stock. In the event of any voluntary of involuntary liquidation, dissolution or winding up on the corporation (a **"Liquidation Event"**), before any payment shall be made to the holders of Common Stock by reason of their ownership thereof: (a) the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, *pari passu* with any distribution to the holders of shares of Series 1 Preferred Stock then outstanding, an amount per share equal to the greater of (i) the Series A Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution or winding up (the amount payable pursuant to this clause is hereinafter referred to as the **"Series A Liquidation Amount"**) and (b) the holders of shares of Series 1 Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, *pari passu* with any distribution to the holders of shares of Series A Preferred Stock then outstanding, an amount per share equal to the greater of (i) the Series 1 Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series 1 Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution or winding up (the amount payable pursuant to this clause is hereinafter referred to as the **"Series 1 Liquidation Amount"**). If upon any such Liquidation Event, the assets of the corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A Preferred Stock and Series 1 Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Series A Preferred Stock and Series 1 Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of a Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Series a Preferred Stock and Series 1 Preferred Stock pursuant to Subsection 2.1 above, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Common Stock.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a **"Deemed Liquidation Event"** unless the holders of at least a majority of the outstanding shares of Series 1 Preferred Stock and Series A Preferred Stock, together voting as a single class on an as-converted basis (the **"Required Holders"**), elect otherwise by written notice sent to the Corporation prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the share of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, as least a majority, by voting power, of the capital stock of 91) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms and the actual outstanding shares of Common Stock are converted or exchanged); or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) Subject to the provisions of this Subsection 2.3.2, in the event of a Deemed Liquidation event, the holders of Preferred Stock shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders in accordance with Subsections 2.1, 2.2 and 2.3 as if such Deemed Liquidation Event were a Liquidation Event. The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan or merger or consolidation for such transaction (the **"Merger Agreement"**) provides that the consideration payable to the

stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1, 2.2 and 2.3.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a Redemption Notice (as defined below) no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Preferred Stock, and (ii) if the Required Holders so request in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders (the **"Available Proceeds"**), to the extent legally available therefor, on the 150th day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the Series A Liquidation Amount or Series 1 Liquidation Amount, as applicable. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the corporation shall redeem a pro rata portion of each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor. If the redemption Notice shall have been duly given, and the redemption price payable upon redemption of the shares of Preferred Stock to be redeemed is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Preferred Stock so called for redemption shall have not been surrendered, all rights with respect to such shares shall forthwith after the redemption date terminate, except only the right of the holders to receive the redemption price without interest upon surrender of their certificate or certificates therefor. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with Deemed Liquidation Event or in the ordinary course of business.

A **"Redemption Notice"** shall mean a written notice of the mandatory redemption to each holder of record of Preferred Stock stating: (i) the number of shares of Preferred Stock held by the holder that the company shall redeem; (ii) the redemption date and price to be paid for each share of Preferred Stock; (iii) the date upon which the holder's right to convert such shares terminates; and (iv) that the holder is to surrender to the Company, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash

or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights of securities shall be determined in good faith by the Board of Directors of the Corporation.

3. Voting.

3,1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of such series of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Second Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of common Stock as a single class.

3.2 Election of Directors. The holders of record of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation; the holders of record of the shares of Series 1 Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation; the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation; the holders of record of a majority of the shares of the common Stock and a majority of the shares of the Series 1 Preferred Stock, each voting as a separate class, shall be entitled to elect two (2) directors of the Corporation; and the holders of record of a majority of the shares of common Stock and Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect one (1) director of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock, Series 1 Preferred Stock or common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock, Series 1 Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Protective Provisions. At any time when shares of Preferred Stock or common Stock are outstanding, the Corporation shall not, either directly or indirectly by

amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law of this Second Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of (i) at least a majority of the then outstanding shares of Series A Preferred Stock (which majority must include the shares of Series A Preferred Stock owned by Brightline Ventures III, LLC (or its affiliates, if applicable) (collectively, **"Brightline"**) for so long as Brightline holds at least 40% of the Series A Preferred Stock initially held by Brightline upon conversion of its convertible promissory notes purchased on or prior to June 30, 2010 (as adjusted for splits, etc.,)), (ii) at least a majority of the then outstanding shares of Series 1 Preferred Stock and (iii) at least a majority of the then outstanding shares of Common Stock, given in writing or by vote at a meeting, each consenting or voting (as the case may be) separately as a class:

(a) amend, alter or repeal any provision of this Second Amended and restated Certificate of Incorporation of Bylaws (unless such action is taken in connection with a Qualified IPO (as defined below)):

(b) create, or authorize the creation of, or issue or obligate itself to issue share of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation and the payment of dividends, or increase the authorized number of shares of Series A Preferred Stock or Series 1 Preferred Stock, or issue any additional shares of such Series A Preferred Stock or Series 1 Preferred Stock, or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation and the payment of dividends (unless such action is taken in connection with a Qualified IPO);

(c) (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation or the payment of dividends, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock in respect of any such right, preference or privilege, (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation or the payment of dividends, if such reclassification , alteration or amendment would render such other security senior to or pari passu with the Series A Preferred Stock in respect of any such right, preference or privilege, or (iii) otherwise reclassify, alter or amend any existing security of the Corporation in any manner that is adverse to the Series A Preferred Stock (unless such action is taken in connection with a Qualified IPO);

(d) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemption of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of common Stock, (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then current fair market

value thereof or (iv) as approved by the Board (unless such action is taken in connection with a Qualified IPO);
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(e) take any action to dissolve or otherwise liquidate the Corporation; or

(f) sell all or substantially all of the Corporation's assets or effect a merger or consolidation or any other transaction resulting in the acquisition of the Corporation, provided, that, no such consent or vote shall be necessary in the event that the holders of the Series A Preferred Stock would receive, as consideration for their shares in such transaction, cash or freely tradable securities worth at least 3x their initial investment.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the **"Conversion Rights"**):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the applicable Original Issue Price (plus all dividends accrued thereon) for such series of Preferred Stock in effect at the time of conversion. The **"Series A Conversion Price"** shall initially be equal to $2.10. the **"Series 1 Conversion Price** shall initially be equal to **$2.35**. Each of the Series A Conversion Price and the Series 1 Conversion Price may be referred to herein as a **"Conversion Price"**. Such initial Conversion Price, and the rate at which shares of the applicable series of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a Liquidation Event or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the **"Conversion Time"**), and the shares of common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provision hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Second Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the a series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be

outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared but unpaid dividends on a series of Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) **"Option"** shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) **"Series A Original Issue Date"** shall mean the date on which the first share of Series A Preferred Stock was issued.'

(c) **"Convertible Securities"** shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.''

(d) **"Additional Shares of Common Stock"** shall mean all shares of Common Stock issued (or pursuant toSubsection 4.4.3 below, deemed to be issued) by the Corporation after the Series A Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2) collectively, **"Exempted Securities"**):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split up or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options (outstanding on the date hereof or issued pursuant to (iii) above) or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities (outstanding on the date hereof or issued pursuant to (i) or (ii) above), in each case provided such issuance is pursuant to the terms of such Option (outstanding on the date hereof or issued pursuant to (iii) above) or Convertible Security (outstanding on the date hereof or issued pursuant to (i) or (ii) above:'

(v) shares of common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided, that such issuances are approved by the Board of Directors of the Corporation; or

(vii) shares of common Stock, Options or convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation.

4.4.2 No Adjustment of conversion Price. No adjustment in the Series A conversion Price shall be made as the result of the issuance or deemed issuance of Additional shares of common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series 1 Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series 1 Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series A Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or convertible Securities, then the maximum number of shares of common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the conversion Price of a series of Preferred Stock pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option of Convertible Security or (2) any increase or decrease in the consideration payable to the corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible security (excluding Options or convertible Securities which are themselves Excepted Securities), the issuance of which did not result in an adjustment to the Conversion Price for a series of Preferred Stock pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series A Original Issue Date), are revised after the Series A Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or convertible Security or 92) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price for a series of Preferred Stock pursuant to the terms of Subsection 4.4.4, such Conversion Price shall be readjusted to such Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) or this Subsection 4.4.3. If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or convertible Security, or the consideration payable to the corporation upon such exercise, conversion and/or exchange cannot be calculated at all at the time such Option or convertible Security is issued or amended, any adjustment to the Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the corporation shall at any time after the Series A Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3, without consideration or for a consideration per share less than the applicable Conversion Price for a series of Preferred Stock

in effect immediately prior to such issue, then such Conversion Price shall be reduced, concurrently with such issue, to a price calculated to the nearest on-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A+C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) "CP_1" shall mean the Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the

proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for convertible Securities, the exercise of such Options for convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price pursuant to the terms of Subsection 4.4.4 then, upon final such issuance, the Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments are a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series A Original Issue Date effect a subdivision of the

outstanding Common Stock, the Conversion Price for a series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series A Original Issue Date combine the outstanding shares of Common Stock, the Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the corporation at any time or from time to time after the Series A Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business of such record date, by multiplying the Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the corporation at any time or from time to time after the Series A Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other

property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as the would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsection 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which is was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price for a series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the such series of Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class of any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of any Liquidation Event,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be,, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution, or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least 20 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $10,000,000 of proceeds to the Corporation (a **"Qualified IPO"**), or (b) the date and time, or the occurrence of an event, specified by vote or written consent of (i) with respect to the Series A Preferred Stock, the holders of at least 66 2/3% of the then outstanding shares of Series A Preferred Stock (which super-majority must include the shares of Series A Preferred Stock owned by Brightline for so long as Brightline holds at least 40% of the Series A Preferred Stock initially held by Brightline upon conversion of its convertible promissory notes purchased on or prior to June 30, 2010 (as adjusted for splits, etc.)) or (ii) with respect to the Series 1 Preferred Stock, the holders of at least 66 2/3% of the then outstanding shares of Series 1 Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the **"Mandatory Conversion Time"**), (y) all outstanding shares of the Series A Preferred Stock (in the case of clause (b)(i)) or Series 1 Preferred Stock (in the case of clause (b)(ii)) shall automatically be converted into shares of Common Stock, at the then effective conversion rate and (z) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of the applicable Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to the Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the

Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificate at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Required Holders.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Second Amended and Restated Certificate of Incorporation or the Corporation's Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the corporation.

SIXTH: Subject to any additional vote required by this Second Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation. The Board shall be divided into three classes, Class I, Class II and Class III, which shall be as nearly equal in number as possible. Each director shall serve for a term ending on the date of the third annual meeting

following the annual meeting at which such director was elected; provided, however, that the initial term of office of directors shall be as follows:

(i) Class I shall expire at the annual meeting of stockholders held in 2010;
(ii) Class II shall expire at the annual meeting of stockholders held in 2011; and
(iii) Class III shall expire at the annual meeting of stockholders held in 20112.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: No member of the Board shall have personal liability arising out of an action whether by or in the right of the company or otherwise for monetary damages for breach of fiduciary duty as a member of the Board; provided, however, that the foregoing shall not limit or eliminate the liability of a member of the Board (i) for any breach of such member's duty of loyalty to the Company or its stockholders, I99) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL or any successor provision, (iv) for any transaction from which such member of the Board derived an improper personal benefit, or (v) acts or omissions occurring prior to the date of the effectiveness of this provision.

Furthermore, notwithstanding the foregoing provision, if the DGCL is amended or enacted to permit further limitation or elimination of the personal liability of the director, the personal liability of the members of the Board shall be limited or eliminated to the fullest extent permitted by the applicable law.

This provision shall not affect any provision permitted under the DGLC, in this Second Amended and Restated Certificate of Incorporation, or in the Bylaws or any contract or resolution of the Company indemnifying or agreeing to indemnify a member of the Board against personal liability. Any repeal or modification of this provision shall not adversely affect any limitation hereunder on the personal liability or any member of the Board with respect to acts of omissions occurring prior to such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with the Section 228 of the General Corporation Law.

4. That this Second Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Amended and Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.
]

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IN WITNESS WHEREOF, this Second Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on the16th day of December, 2011.

By: /s/ Jeffrey Wolf
Jeffrey Wolf, Chief Executive Officer

HLG:261721

Heat Biologics, Inc.
Second Amended and Restated Certificate of Incorporation
-Signature Page-

EXHIBIT 4.1

HEAT BIOLOGICS, INC.

2009 STOCK INCENTIVE PLAN

1. Purpose

The purpose of this 2009 Stock Incentive Plan (the "Plan") of Heat Biologics, Inc., a Delaware corporation (the "Company"), is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to align their interests with those of the Company's stockholders. Except where the context otherwise requires, the term "Company" includes the Company's present or future parent or subsidiary corporations as defined in Sections *424(e)* or (f) of the Intemal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the "Code") and other business ventures (including, without limitation, any joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the "Board").

2. Eligibility

All of the Company's employees, officers, directors, and individual consultants and advisors (each a "Service Provider") are eligible to receive options, restricted stock, restricted stock units and other stock-based awards (each, an "Award") under the Plan. Each person who receives an Award under the Plan is deemed a "Participant."

3. Administration and Delegation

(a) Administration by Board of Directors. The Plan shall be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any A ward in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award. No director or person acting pursuant to the authority delegated by the Board shall be liable for any action or determination relating to or under the Plan made in good faith.

(b) Appointment of Committees. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a "Committee"). All references in the Plan to the "Board" shall mean the Board or a Committee of the Board to the extent that the Board's powers or authority under the Plan have been delegated to such Committee.

4. Stock Available for Awards.

(a) Subject to adjustment under Section 8, Awards may be made under the Plan for up to 500,000 shares of the common stock of the Company, $0.0001 par value per share (the "Common Stock"). If any Award expires or is terminated, surrendered, or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such A ward being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right) or results in any Common Stock not being issued, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan. Further, shares of Common Stock tendered to the Company by a Participant to exercise an Award shall be added to the number of shares of Common Stock available for the grant of Awards under the Plan. However, in the case of Incentive Stock Options (as hereinafter defined), the foregoing provision~ shall be subject to any limitations under the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares. At no time while there is any Option (as defined below) outstanding and held by a Participant who was a resident of the State of California on the date of grant of such Option, shall the total number of shares of Common Stock issuable upon exercise of all outstanding options and the total number of shares provided for under any stock bonus or similar plan or agreement of the Company exceed the applicable percentage as calculated in accordance with the conditions and exclusions of Section 260.140.45 of the California Code of Regulations, as amended (the "California Regulations"), based on the shares of the Company which are outstanding at the time the calculation is made unless the Plan complies with all conditions of Rule 70 I of the Securities Act of 1933, as amended.

(b) Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a), except as may be required by reason of Section 422 and related provisions of the Code.

5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an "Option") and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable. An Option, or portion of an Option, which is not intended to be or fails to qualify as an Incentive Stock Option (as hereinafter defined) shall be designated a "Nonstatutory Stock Option."

(b) Incentive Stock Options. An Option that the Board intends to be an "incentive stock option" as defined in Section 422 of the Code (an "Incentive Stock Option") shall only be granted to employees of the Company and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. A Participant who owns more than 10% of the total combined voting power of all classes of outstanding stock of the Company shall not be eligible for the grant of an Incentive Stock Option unless (i) the exercise price is at least 110% of the Fair Market Value (as defined below) on the date the Option is granted and (ii) such Incentive Stock Option by its terms is not exercisable after the expiration of five years from the date the Option is granted. The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereot) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or for any action taken by the Board pursuant to Section 9(t), including without limitation the conversion of an Incentive Stock Option to a Nonstatutory Stock Option.

(c) Exercise Price. The Board shall establish the exercise price of each Option and specify such exercise price in the applicable option agreement. The exercise price shall be not less than 100% of the Fair Market Value on the date the Option is granted; provided that if the Board approves the grant of an Option with an exercise price to be determined on a future date, the exercise price shall be not less than 100% of the Fair Market Value on such future date. The term "Fair Market Value" shall mean, as of a given date: (i) if the Common Stock is listed on a national securities exchange, the last sale price of the Common Stock in the principal trading market for the Common Stock on such date; (ii) if the Common Stock is not listed on a national securities exchange, but is traded in the over-the counter market, the closing bid price for the Common Stock on such date, as reported by the OTC Bulletin Board or the National Quotation Bureau, Incorporated or similar publisher of such quotations; or (iii) if the Common Stock is not listed on a national securities exchange or traded in the over-the-counter market, such price as shall be determined by (or in a manner approved by) the Board in good faith and in compliance with applicable provisions of the Code and the regulations issued thereunder.

(d) Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement.

(e) Exercise of Option. Options may be exercised by delivery to the Company of a written notice of exercise signed by the proper person or by any other form of notice (including electronic notice) approved by the Board together with payment in full as specified in Section 5(t) for the number of shares of Common Stock for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company following exercise either as soon as practicable or, subject to such conditions as the Board shall specify, on a deferred basis (with the Company's obligation to be evidenced by an instrument providing for future delivery of the deferred shares at the time or times specified by the Board).

(t) Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

(1) in cash or by check, payable to the order of the Company;

(2) except as may otherwise be provided in the applicable option agreement, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) when the Common Stock is registered under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and to the extent provided for in the applicable option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;
(4) to the extent permitted by applicable law and provided for in the applicable option agreement or approved by the Board, in its sole discretion, by (i) delivery of a promissory note of the Participant to the Company on terms determined by the Board, or (ii) payment of such other lawful consideration as the Board may determine; or

(5) by any combination of the above permitted forms of payment.

6. Restricted Stock; Restricted Stock Units

(a) General. The Board may grant Awards entitling recipients to acquire shares of Common Stock ("Restricted Stock"), subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. Instead of granting Awards for Restricted Stock, the Board may grant Awards entitling the recipient to receive shares of Common Stock to be delivered at the time such shares of Common Stock vest ("Restricted Stock Units") (Restricted Stock and Restricted Stock Units are each referred to herein as a "Restricted Stock Award").

(b) Terms and Conditions. The Board shall determine the terms and conditions of a Restricted Stock A ward, including the conditions for repurchase (or forfeiture) and the issue price, if any.

(c) Additional Provisions Relating to Restricted Stock.

(i) Dividends. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares, unless otherwise provided by the Board. If any such dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock other than an ordinary cash dividend, the shares, cash or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid. Each dividend payment will be made no later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the date the dividends are paid to stockholders of that class of stock.

(2) Stock Certificates. The Company may require that any stock certificates' issued in respect of a Restricted Stock Award shall be registered in the name of the Participant and be deposited by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). After the expiration of the applicable restriction periods, upon request of a Participant or as otherwise determined by the Company, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death (the "Designated Beneficiary"). In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's then living spouse, or, if none, the Participant's estate.

7. Other Stock-Based Awards

Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants ("Other Stock-Based Awards"), including without limitation stock appreciation rights and Awards entitling recipients to receive shares of Common Stock to be delivered in the future. Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock or cash, as the Board shall determine. Subject to the provisions of the Plan, the Board shall determine the conditions of each Other Stock-Based Award, including any purchase price applicable thereto.

8. Adjustments for Changes in Common Stock and Certain Other Events

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under this Plan, (ii) the number and class of securities and exercise price per share of each outstanding Option, (iii) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock A ward, and (iv) the terms of each other outstanding Award shall be equitably adjusted by the Company (or substituted Awards may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Change in Control

(l) Definition. Unless otherwise specifically provided in an Award agreement, a "Change inControl" shall be deemed to have occurred upon the first to occur of:

(i) any "person" (as such term is used in sections 13(d) and 14(d) of the Exchange Act) becoming a "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing either (A) more than a majority of the voting power of the then outstanding securities of the Company, or (B) more than a majority of the aggregate fair market value of the then outstanding securities of the Company; provided, however, that a Change in Control shall not be deemed to occur as a result of (x) a transaction in which the Company becomes a subsidiary of another corporation and in which the stockholders of the Company, immediately prior to the transaction, will beneficially own, immediately after the transaction, shares entitling such stockholders to more than majority of all votes to which all stockholders of the parent corporation would be entitled in the election of directors, or (y) a transaction in which the person acquires newly issued securities of the Company in exchange for an investment in the Company; or

(ii) the consummation of either: (A) a merger, share exchange, consolidation or reorganization of the Company where the stockholders of the Company, immediately prior to the merger or consolidation, will not beneficially own, immediately after the merger, share exchange, consolidation or reorganization, shares entitling such stockholders to either (x) more than a majority of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, or (y) more than a majority of the aggregate fair market value of then outstanding securities of the Company; or (B) a sale or other disposition of all or substantially all of the assets of the Company.
(2) Consequences of a Change in Control on Awards Other than Restricted Stock Awards. In connection with a Change in Control, the Board may take anyone or more of the following actions as to all (or any portion of) outstanding A wards other than Restricted Stock Awards on such terms as the Board determines: (i) provide that A wards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof) in compliance with the applicable provisions of the Code, including Code Sections 409A, 422 and 424, (ii) upon written notice to a Participant, provide that the Participant's unexercised Options or other unexercised Awards will terminate immediately prior to the consummation of such Change in Control unless exercised by the Participant within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable or deliverable, or restrictions applicable to an A ward shall lapse, in whole or in part prior to or upon such Change in Control, (iv) in the event of a Change in Control under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Change in Control (the "Acquisition Price"), make or provide for a cash payment to a Participant equal to the excess, if any, of (A) the Acquisition Price times the number of shares of Common Stock subject to the Participant's Options or other Awards (to the extent the exercise price does not exceed the Acquisition Price) less (B) the aggregate exercise price of all such outstanding Options or other Awards and any applicable tax withholdings, in exchange for the termination of such Options or other Awards, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise price thereof) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 8(b), the Board shall not be obligated by the Plan to treat all Awards, or all Awards of the same type, identically.

For purposes of clause (i) above, an Option shall be considered assumed if, following consummation of the Change in Control, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Change in Control, the consideration (whether cash, securities or other property) received as a result of the Change in Control by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Change in Control (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Change in Control is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) with equivalent in value (as determined by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Change in Control.

(3) Consequences of a Change in Control on Restricted Stock Awards. Upon the occurrence of a Change in Control other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Change in Control in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award. Upon the occurrence of a Change in Control involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock Awards then outstanding shall automatically be deemed terminated or satisfied.

9. General Provisions Applicable to Awards

(a) Transferability of Awards. Except as the Board may otherwise expressly determine or provide in an Award, Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and, during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

(b) Documentation. Unless otherwise expressly determined by the Board, each Incentive Stock Option shall be evidenced by a Notice of Incentive Stock Option and Incentive Stock Option Agreement substantially in the form attached as **Exhibit A**, each Nonstatutory Stock Option shall be evidenced by a Notice of Nonstatutory Stock Option and Nonstatutory Stock Option Agreement substantially in the form attached as **Exhibit B**, and each Restricted Stock Award shall be evidenced by a Summary of Restricted Stock Purchase and Restricted Stock Purchase Agreement substantially in the form attached as **Exhibit C**. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) Board Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, termination of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise or release from forfeiture of an Award or, if the Company so requires, at the same time as is payment of the exercise price unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; provided, however, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares surrendered to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(t) Amendment of Award.

(1) The Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option, provided that the Participant's consent to such action shall be required unless the Board determines that the action, taking into account any related action, would not materially and adversely affect the Participant.

(2) The Board may, without stockholder approval, amend any outstanding Award granted under the Plan to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Award provided that such amended exercise price is at least equal to the then-current Fair Market Value. The Board may also, without stockholder approval, cancel any outstanding award (whether or not granted under the Plan) and grant in substitution new Awards under the Plan covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled award.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules, regulations or contracts of the Company.

(h) Acceleration. The Board may at any time provide that any Award shall become immediately exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

10. Miscellaneous

(a) No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.

(b) No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares. Notwithstanding the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend or otherwise and the exercise price of and the number of shares subject to such Option are adjusted as of the effective date of the stock dividend or split (rather than as of the record date for such stock dividend or split), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend or split shall be entitled to receive, on the distribution date, the stock dividend or split with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend or split.

(c) Effective Date and Term of Plan. The Plan shall become effective on the date on which it is adopted by the Board. No Awards shall be granted under the Plan after the expiration of 10 years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time; provided, however, that if at any time the approval of the Company's stockholders is required as to any modification or amendment under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section I O(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment does not materially and adversely affect the rights of Participants under the Plan.

(e) Authorization of Sub-Plans. The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable blue sky, securities or tax laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to this Plan containing

(i) such limitations on the Board's discretion under the Plan as the Board deems necessary or desirable or

(ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Company shall not be required to provide copies of any supplement to Participants in any jurisdiction which is not the subject of such supplement.

(t) Compliance with Code Section 409A. It is intended that all Awards granted hereunder be either exempt from, or issued in compliance with, Code Section 409A. The Company shall have no liability to a Participant, or any other party, if an Award that is intended to be exempt from, or compliant with, Code Section 409A is not so exempt or compliant, or for any action taken by the Board.

(g) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware, as to matters within the scope thereof, and the internal laws of the State of Florida (without reference to conflict of law provisions), as to all other matters.

* * * * * * * *

HEAT BIOLOGICS, INC.
2009 STOCK INCENTIVE PLAN
CALIFORNIA SUPPLEMENT

Pursuant to Section 10(e) of the Plan, the Board has adopted this supplement for purposes of satisfying the requirements of Section 251 02(0) of the California Corporations Code, as amended:

Any Awards granted under the Plan to a Participant who is a resident of the State of California on the date of grant (a **"California Participant")** shall be subject to the following additional limitations, terms and conditions:

I. Additional Limitations on Awards.

(a) Generally. The terms of all Awards granted to a California Participant under Sections 5, 6 or 7 of the Plan shall comply, to the extent applicable, with Section 260.140.41 or Section 260.140.42 of the California Regulations.

(b) Maximum Duration of Options. No Options granted to California Participants shall have a term in excess of 10 years measured from the Option grant date.

(c) Minimum Exercise Period Following Termination. Unless a California Participant's employment is terminated for cause (as defined by applicable law, the terms of any contract of employment between the Company and such Participant, or in the instrument evidencing the grant of such Participant's Option), in the event of termination of employment of such Participant, such Participant shall have the right to exercise an Option, to the extent that he or she was otherwise entitled to exercise such Option on the date employment terminated, until the earlier of the Option expiration date or: (i) at least six months from the date of termination, if termination was caused by such Participant's death or **"permanent and total disability"** (within the meaning of Section 22(e)(3) of the Code) and (ii) at least 30 days from the date of termination, if termination was caused other than by such Participant's death or "permanent and total disability" (within the meaning of Section 22(e)(3) of the Code).

1. Additional Requirement to Provide Information to California Participants. Unless the Plan or agreement complies with all conditions of Rule 701 of the Securities Act of 1933, as amended **("Rule 701**"), the Company shall provide to each California Participant and to each California Participant who acquires Common Stock pursuant to the Plan, not less frequently than annually, copies of annual financial statements (which need not be audited). The Company shall not be required to provide such statements to key employees whose duties in connection with the Company assure their access to equivalent information or when the Plan or agreement complies with all conditions of Rule 701.

2. Additional Limitations on Timing of Awards. No Award granted to a California Participant shall become exercisable, vested or realizable, as applicable to such Award, unless the Plan has been approved by the holders of at least a majority of the Company's outstanding voting securities by the later of (i) within 12 months before or after the date the Plan was adopted by the Board or the agreement entered into; and (ii) prior to or within 12 months of the granting of any option or issuance of any security under the Plan or agreement to a California Participant.

3. Additional Restriction Regarding Recapitalizations, Stock Splits, Etc. For purposes of Section 8 of the Plan, in the event of a stock split, reverse stock split, stock dividend, recapitalization, combination, reclassification or other distribution of the Company's securities, the number of securities allocated to each California Participant must be adjusted proportionately and without the receipt by the Company of any consideration from any California Participant.

EXHIBIT 4.2

FIRST AMENDMENT OF THE
HEAT BIOLOGICS, INC. 2009 STOCK INCENTIVE PLAN

This First Amendment fo the Heat Biologics, Inc. 2009 Stock Incentive Plan (the "Plan") is effective September 2, 2010.

WHEREAS, the Board of Directors (the "Board") of Heat Biologics, Inc., a Delaware corporation (the "Company") has adopted and the stockholders of the Company have approved the Plan; and

WHEREAS, the Board has approved this amendment of the Plan in order to allow for the early exercise of stock options granted under the Plan.

NOW, THEREFORE, the Plan shall be amended as follows:

1. The following paragraph shall be inserted as paragraph 5(g) of the Plan:

"(g) Early Exercise of Option. The Board may provide, in its sole discretion, that any Option may be exercisable pursuant to an early exercise provision in such Option, provided that the Shares received upon such early exercise shall be subject to a restricted stock agreement in a form acceptable to the Board. The Board may amend any previously granted Option to provide for the early exercise of such Option by inclusion of a paragraph substantially in the form of the following as a new paragraph 3(c) of the applicable stock option agreement:

3(c) Early Exercise. The Participant may elect to exercise this Option or any portion thereof before it is fully vested and hold such Shares subject to the provisions of a Summary of Restricted Stock Purchase, Early Exercise of Stock Option and Restricted Stock Purchase Agreement, Early Exercise of Stock Option in substantially in the form approved pursuant to the Plan.

No Option shall be eligible for early exercise unless and until the Board specifically provides for such rights."

2. Except as amended herein, the terms and provisions of the Plan shall remain unchanged and in full force and effect.

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IN WITNESS WHEREOF, the undersigned Chief Executive Officer of the Company certifies that the foregoing First Amendment of the Hear Biologics, Inc. 2009 Stock Incentive Plan was duly adopted by the Board of Directors of the Company.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf
Jeffrey Wolf, Chief Executive Officer

Heat Biologics, Inc.
First Amendment of the Heat Biologics, Inc. 2009 Stock Incentive Plan
· Signature Page ·

EXHIBIT 4.3

SECOND AMENDMENT OF THE
HEAT BIOLOGICS, INC. 2009 STOCK INCENTIVE PLAN

This Second Amendment of the Heat Biologics, Inc. 2009 Stock Incentive Plan (the "**Plan**") is effective April 7, 2011.

WHEREAS, the Board of Directors (the "**Board**") of Heat Biologics, Inc., a Delaware corporation (the "**Company**") has adopted and the stockholders of the Company have approved the Plan, as amended; and

WHEREAS, the Board of Directors deems it to be in the best interest of the Corporation to amend the Plan in order to increase the maximum number of shares of common stock issuable pursuant to options granted under the Plan from 500,000 shares to 1,500,000

WHEREAS, the Board has approved this amendment of the Plan in order to allow for the early exercise of stock options granted under the Plan.

NOW, THEREFORE, the Plan shall be amended as follows:

1. The first sentence of Section 4(a) shall be deleted in its entirety and the following substituted in lieu thereof:

"Subject to adjustment under Section 8, Awards may be made under the Plan for up to 1,500,000 shares of common stock of the Company, $0.0001 par value per share (the "**Common Stock**")."

2. Except as amended herein, the terms and provision of the Plan shall remain unchanged and in full force and effect.

[*Remainder of Page Intentionally Left Blank*]

IN WITNESS WHEREOF, the undersigned Chief Executive Officer of the Company certifies that the foregoing Second Amendment of the Heat Biologics, Inc. 2009 Stock Incentive Plan was duly adopted by the Board of Directors of the Company.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf
Jeffrey Wolf, Chief Executive Officer

EXHIBIT 4.4

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

WARRANT TO PURCHASE STOCK

Corporation:	Heat Biologics, Inc.
Number of Shares:	17,500 (subject to adjustment pursuant to Section 1.7)
Class of Stock:	Series A Preferred
Initial Exercise Price:	$2.10 per share
Issue Date:	August 7, 2012
Expiration Date:	August 7, 2022

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, Square 1 Bank or its assignee (***Holder***") is entitled to purchase the number of fully paid and nonassessable shares of the class of securities (the "***Shares***") of the corporation (the "***Company***" at the initial exercise price per Share (the "***Warrant Price***") all as set forth above and as adjusted pursuant to Article 2 of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant.

ARTICLE I

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company's stock into which the Shares are convertible) reported for the business day immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the Board of Directors of the Company shall determine fair market value in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired and, if this warrant has not been fully exercised or converted and has not expired, a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, on surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Repurchase on Sale, Merger, or Consolidation of the Company.

1.6.1 "Acquisition." For the purpose of this warrant, "Acquisition" means (a) any sale, license, or other disposition of all or substantially all of the assets (including intellectual property) of the Company, or (b) any reorganization, consolidation, merger or sale of the voting securities of the Company or any other transaction where the holders of the Company's securities before the transaction beneficially own less than 50% of the outstanding voting securities of the surviving entity after the transaction.

1.6.2 Assumption of Warrant. If upon the closing of any Acquisition the successor entity assumes the obligations of this warrant, then this warrant shall be exercisable for the same securities, cash, and property as would be payable for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on the record date for the Acquisition and subsequent closing. The Warrant Price shall be adjusted accordingly. The Company shall use reasonable efforts to cause the surviving corporation to assume the obligations of this warrant.

1.6.3 Nonassumption. If upon the closing of any Acquisition the successor entity does not assume the obligations of this warrant and Holder has not otherwise exercised this warrant in full, then Holder shall have the option either to (a) deem this warrant to have been automatically converted pursuant to Section 1.2 and thereafter Holder shall participate in the (b) require the Company to purchase this warrant for cash upon the closing of the Acquisition for an amount per Share equal to three (3) times the Warrant Price.

1.7 Adjustment in Number of Shares. If the Company requests, and Square 1 Bank makes, Tranche A Term Loans (as defined in that certain Loan and Security Agreement by and between the Company and Square 1 Bank dated on or about August 7, 2012, as amended from time to time) in an aggregate amount in excess of $1,000,000, then the number of shares for which this warrant is exercisable shall automatically increase by 25,357 shares. With respect to any adjustment to the number of shares pursuant to this Section 1.7, all shares subject to this warrant shall be of the same series and class of stock and bear the same rights, preferences, and privileges as such series and class of stock denoted in the above caption hereto. The adjustment under this Section 17 shall be in addition to any adjustment made pursuant to Article 2 hereof.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock payable in common stock, or other securities, or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, Holder shall be entitled to receive, upon exercise or conversion of the warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had be exercised immediately before such reclassification, exchange, substitution, or other event. Such an event of the same class or series as the Shares to common stock pursuant to the terms of the Company's Articles of Incorporation upon the closing of a registered public offering of the Company's common stock. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2. shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a greater number of shares, the Warrant Price shall be proportionately decreased.

2.4 Adjustments for Diluting Issuances. In the event of the issuance (a "***Diluting Issuance***") by the Company after the Issue Date of securities as a price per share less than the Warrant Price, then the number of shares of common stock issuable upon conversion of the Shares shall be adjusted in accordance with those provisions of the Company's Articles (Certificate) of Incorporation that apply to Diluting Issuances.

2.5 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.6 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of the warrant, and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise of conversion of the warrant, the Company shall eliminate such fractional share interest by paying the Holder the amount computed by multiplying the fractional interest by the fair market value of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS OF THE COMPANY

3.1 Representations and Warranties. The Company hereby represents and warrants to the Holder as follows:

(a) The initial Warrant Price referenced on the first page of this warrant is not greater than the fair market value of the Shares as of the date of this warrant.

(b) All Shares which may be issued upon the exercise of the purchase right represented by thi warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassesable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(c) The Company's capitalization table attached to this warrant is true and complete as of the Issue Date.

3.2 Notice of Certain Events. The Company shall provide Holder with not ltess than 10 days prior written notice, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend: (b) offering for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights' (c) effecting any reclassification or recapitalization of common stock; or (d) the merger or consolidation with or into any other corporation, or sale, lease, license, or conveyance of all or substantially all of its assets, or liquidation, dissolution or winding up.

3.3 Information Rights. So long as the Holder holds this warrant and/or any of the Shares, the Company shall deliver to the Holder (a) promptly after mailing, copies of all communiques to the shareholders of the Company, (b) within one hundred eighty (180) days after the end of each fiscal year of the Company, the annual audited financial statements of the Company certified by independent public accounts of recognized stand and (c) within forty-five (45) days after the end of each of the first three quarters of each fiscal year, the Company's quarter, unaudited financial statements.

3.4 Registration Under Securities Act of 1933, as amended. The Company agrees that the Shares or, if the Shares are convertible into common stock of the Company, such common stock, shall be "Registrable Securities", and Holder shall be a "Holder" under the Amended and Restated Stockholders' Agreement among the Company and other persons, as it may be amended from time to time.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above; provided, however, that if the Company completes its initial public offering within the three-year period immediately prior to the Expiration Date, the Expiration Date shall automatically be extended until the third anniversary of the effective date of the Company's initial public offering. If the warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by "cashless" conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144(d) and (e) in reasonable detail, the selling broker represents that is has complied with Rule 144(f), and the Company is provided with a copy of Holder's notice of proposed sale.

4.4 Transfer Procedure. Subject to the provisions of Section 4.3, Holder may transfer all or part of this warrant or the Shares issuable upon exercise of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required if the transfer is to an affiliate of Holder.

4.5 Notices. All notices and other communications from the company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, at such address as may have been furnished to the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time. All notices to the holder shall be addressed as follows:

Square 1 Bank
Attn: Warrant Administrator

406 Blackwell Street, Suite 240
Crowe Building
Durham, NC 27701

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of North Carolina, without giving effect to its principles regarding conflicts of law.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed the Warrant to Purchase Stock as of the date set forth above.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf
Name: Jeffrey Wolf
Title: CEO

[Signature Page to Warrant to Purchase Stock]

APPENDIX I

NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the _____ stock of **HEAT BIOLOGICS, INC.** pursuant to the terms of the attached warrant, and tenders here with payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

Square 1 Bank
Attn: Warrant Administrator
406 Blackwell Street, Suite 240
Fowler Building
Durham, NC 27701

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws.

SQUARE 1 BANK or Registered Assignee

_____
(Signature)

_____
(Date)

THIS WARRANT AND THE UNDERLYING SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT AS TO SUCH SECURITIES UNDER SAID ACT OR AN OPINION OF COUNSEL THAT SUCH REGISTRATION IS NOT REQUIRED.

STOCK WARRANT

Issue Date: December 14, 2011 Expiration Date: December 13, 2021

THIS CERTIFIES that, for value received,, the North Carolina Biotechnology Center (the "Center") is entitled to subscribe for and purchase from Heat Biologics, Inc. (the "Company"), 29.762 shares of the Company's Series A Preferred Stock (the "Shares"), subject to adjustment as set forth herein, at a price per Share of $2.10, subject to adjustment as set forth herein (the "Exercise Price").

Section 1 ***Method of Exercise and Expiration***

1.1 **Term and Expiration**. Subject to the terms and conditions set forth in this Warrant, this Warrant may be exercised in whole or in part at any time and from time to time from the date hereof through the Expiration Date (The "Exercise Period"). If this Warrant is exercised in part from time to time during the Exercise Period, it shall be exercised in minimum quantities of Shares equal to 100 shares (or such lesser number of shares which may then constitute the maximum number purchasable; such number being subject to adjustment as set forth herein).

1.2 **Deliverables by the Center Upon Exercise**. This Warrant shall be exercised by delivery of the following to the Company at the address of the Company in the Center's records, Attention: President / CEO (or at such other agency or office of the Company as it may designate by notice in writing to the Center at the address of the Center appearing in the books of the Company):

(a) an executed Notice of Exercise in the form attached hereto asExhibit A;

(b) payment of the Exercise Price for the aggregate amount of Shares being purchased (i) in cash or cashier's check, (ii) by cancellation by the Center of indebtedness or other obligations of the Company to the Center, (iii) by a combination of (i) and (ii) or (iv) pursuant to Section 1.4 below; and

(c) this Warrant.

1.3 **Deliverables by the Company Upon Exercise**. In the event of any exercise of the rights represented by this Warrant, a certificate or certificates for the Shares so purchased, registered in the name of the person or entity entitled to receive the same, shall be delivered to the Center within thirty (30) days (or such later time agreed to in writing by the Center) after the rights represented by this Warrant shall have been so exercised; provided, that if the Company does not customarily issue share certificates, an appropriate and binding entry in the stock ledger

of the Company may be made in lieu of the certificates called for by this Section 1.3 and the Company shall deliver to the Center a copy of such stock ledger certified by an appropriate officer of the Company. Unless this Warrant has expired or been fully exercised, a new warrant representing the Shares, if any, with respect to which this Warrant shall not then have been exercised shall also be issued to the Center within such time, containing the same terms and conditions specified herein. The person or entity in whose name any certificate or certificates for Shares are to be issued upon exercise of this Warrant shall for all purposes be deemed to have become the holder of record of such Shares on the date on which this Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery or such certificate or certificates, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person or entity shall be deemed to have become the holder of record of such Shares at the close of business on the next succeeding date on which the stock transfer books are open.

1.4 **Net Issue Exercise**. Notwithstanding any provisions herein to the contrary, if the fair market value of one (1) Share is greater than the Exercise Price (at the date of calculation as set forth below), in lieu of exercising this Warrant for cash, the Center may elect to receive shares equal to the value (as determined below) of this Warrant (or the portion thereof being exercised) (such election being referred to herein as a "Net Issue Exercise Election") by surrender of this Warrant at the principal office of the Company together with the properly endorsed Notice of Exercise and notice of such election in which event the company shall issue to Center a number of Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where X = the number of Shares to be issued to the Center.

Y = the number of Shares purchasable under this Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being exercised.

A = the "fair market value" (as defined below) of one (1) Share

B = the Exercise Price per Share (as adjusted to the date of such calculation).

For purposes of this Section 1.4, the fair market value per Share shall be the product of (i) the average of the closing bid and asked prices of the Shares quoted in any applicable over the counter market summary or the last reported sale price of the Shares or the average closing price quoted on any exchange on which the Shares are listed, whichever is applicable, for thirty (30) trading days prior to the date of determination of fair market value and (ii) the number of Shares into which each Share is convertible at the time of such exercise. If the Shares are not traded over the counter or on an exchange, the fair market value shall be the price per Share which the Company could obtain from a willing buyer for Shares sold by the Company from authorized but unissued shares, as such price shall be agreed in good faith by the Company and the Center. If the Company and the Center are unable to agree on the "fair market value" of the Shares within

ten (10) days of receipt of the Notice of Exercise required under Section 1.2(a) above, then the fair market value shall be determined by an independent valuation expert selected by the Company and reasonably acceptable to the Center. Notwithstanding the foregoing, in the event the Warrant is exercised in connection with the Company's initial public offering of Shares, the fair market value per Share shall be the product of (i) the per Share offering price to the public of the Company's initial public offering, and (ii) the number of Shares into which each Share is convertible at the time of exercise.

In the event that the Center makes a Net Issue Exercise Election pursuant to this Section 1.4, the provisions of Section 1.2 regarding certain delivery obligations of the Center, and Section 1.3 regarding certain delivery obligations of the Company, shall be fully applicable upon such election.

Section 2. ***Representations and Warranties of Company***

2.1 **Organization**. The Company is duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is incorporated and is duly qualified and is in good standing as a foreign Company in those jurisdictions where the conduct of its business or ownership of its property requires qualification. The Company has the corporate power to carry out the business in which it is engaged.

2.2 **Valid Obligation**. The execution and delivery of this Warrant and any related documents have been duly authorized by all necessary action of the Board of Directors and shareholders of the Company under applicable law, and are not and will not be in contravention of any provision of law, nor in contravention of any certificate of authority, bylaw or other applicable corporate documents of the Company, nor result in the breach of any agreement, indenture or undertaking to which the Company is a party or by which it is bound.

2.3 **Shares**. All shares which may be issued upon the exercise of the rights represented by this Warrant will, upon issuance, be validly issued and outstanding, fully paid and nonassessable, with no personal liability attaching to the ownership thereof, and free from all taxes, liens and charges with respect to the issuance thereof.

Section 3. ***Covenants of Company***.

3.1 **Covenants as to Shares**. The Company covenants and agrees that the company shall authorize and reserve a sufficient number of Shares to provide for all permitted exercises of the rights represented by this Warrant. If at any time the number of authorized but unissued Shares shall not be sufficient to effect any permitted exercise of this Warrant, the Company shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued Shares to such number of shares as shall be sufficient for such purposes. The Company shall give the Center at least thirty (30) days prior written notice of the filing of a registration statement under the Securities Act of 1933, as amended (the "Act"), covering the offering and sale of the Company's securities.

3.2 **No Impairment**. Except and to the extent waived or consented to by the Center in writing, the Company will not, by amendment of its charter or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities of any other

action, avoid or seek to avoid the observance or performances of any of the terms to be observed or performed hereunder by the Company, but will at all times in good faith assist in the carrying out of all the provisions in this Warrant and in the taking of all such action as may be necessary or appropriate in order to protect from impairment the rights of the Center to purchase the Shares hereunder.

3.3 **Notice of Record Date**. In the event the company establishes a record date in order to determine the holders of any class of securities of the Company as of such record date: (i) for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend which is the same as cash dividends paid in the previous two (2) quarters) or any other distribution as regards any securities of the Company (whether in cash, in securities, or pursuant to any spin-off, split-off or distribution of the Company's assets); (ii) for the purpose of entitling them to subscribe for or purchase any shares of any class of securities or to receive any other rights; (iii) for any classification, reclassification, or other reorganization of the securities which the Company is now or hereafter authorized to issue, the consolidation or merger of the Company with or into another Company, or the conveyance of all or substantially all of the assets of the Company; or (iv) for a voluntary or involuntary dissolution, liquidation or winding up of the Company; then, the Company shall provide written notice to the Center, at least thirty (30) days prior to the proposed record dates, specifying the record date.

3.4 **Adjustment Due to Change in Number of Outstanding Shares**. In any of the following events (each a "Triggering Event"), appropriate adjustment shall be made in the number of Shares which may be purchased by the Center upon the exercise of this Warrant, or in the Exercise Price per Share to be paid, so as to maintain the proportional interest of the Center in the ownership, on a fully diluted basis, of the Company, as follows:

(a) If the Company shall at any time subdivide any class of its equity securities by split-up or otherwise, or combine its outstanding equity securities, or issue additional shares of its equity securities in payment of a dividend in respect of its equity securities, the number of Shares underlying this Warrant shall be proportionately increased and the Exercise Price proportionately decreased in the case of a subdivision or stock dividend, and the number of Shares underlying this Warrant shall be proportionately decreased and the Exercise Price proportionally increased in the case of a combination.

(b) In case of any reclassification or change of the outstanding equity securities of the Company (other than as a result of a subdivision, combination or dividend), or in case of any consolidation of the Company with, or merger of the Company into, another company or other business organization (other than a consolidation or merger in which the Company is the continuing Company and which does not result in any reclassification or change of the outstanding equity securities of the Company or in the issuance of any other securities of the Company), or in case of any sale or conveyance to another Company or other business organization of the property of the Company as an entirety or substantially as an entirety, then the Center or other holder of this Warrant shall have the right to acquire the kind and amount of shares of capital stock and other securities and property receivable upon such reclassification, change, consolidation, merger, sale or conveyance by a holder of the number of Shares of the Company which might have been acquired by the Center upon exercise of this Warrant immediately prior to such reclassification, change, consolidation, merger, sale or conveyance

(c) If the Company shall, after the date hereof, at any time or from time to time issue or is deemed to have been issued (as defined below), any Shares for a purchase price per Share less than the then-current Exercise Price, then the Exercise Price shall immediately be reduced to the price determined using the following formula, on a fully diluted basis:

$$X = \frac{((A \times B) + C)}{Y}$$

Where X = the reduced Exercise Price

A = the number of Shares outstanding or deemed outstanding immediately prior to such issuance.

B = the Exercise Price in effect immediately prior to such issuance.

C = the aggregate fair value of the consideration, if any, received or receivable by the Company upon each and every issuance or deemed issuance of additional Shares (including without limitation consideration receivable upon the issuance of securities underlying any other securities).

Y = the aggregate number of Shares outstanding or deemed outstanding immediately after such issuance.

Upon termination or rights to purchase or acquire Shares, by lapse or otherwise, the shares theretofore issuable, but not issued, shall cease to be included in the formula set forth above, and the Exercise Price shall be readjusted to reflect such termination. Notwithstanding the foregoing, there shall be no adjustment to the Exercise Price or the number of Shares obtainable upon exercise of this Warrant with respect to a Permitted Issuance. A “Permitted Issuance” means (i) the granting of options to purchase Shares, or other stock-based benefits, to employees, directors or consultants of the Company or the exercise thereof, pursuant to any reservation under any employee benefit plan to the extent and as in effect on the date of this Warrant, or approved thereafter by the Board of Directors of the Company, in an aggregate amount not to exceed five percent (5%) of the Shares deemed outstanding s of the date hereof, or (ii) the issuance of Shares pursuant to the exercise of options, convertible equity securities, or other rights to acquire Shares that are outstanding on the date of this Warrant.

For purposes of this Warrant, additional Shares shall be “deemed to have been issued”, “deemed issued”, or “deemed outstanding”, if the Company shall at any time issue any of its Shares or other securities, or other rights, warrants, or options to subscribe for or purchase Shares of other securities, which, in any such case, ranks at an equal priority with the Shares, or which includes an option to acquire or a right to convert to Shares or other securities ranking at an equal priority with the Shares at a price per share after such acquisition or conversion less than the Exercise Price.

Upon any Triggering Event, adequate provision shall be made whereby the Center or other holder of this Warrant shall have the right to receive and acquire (upon exercise of this Warrant)

such Shares, securities, cash, or other property as would have been issuable or payable (as part of the Triggering Event) with respect to or in exchange for such number of outstanding Shares as would have been received had this Warrant been exercised immediately prior to such Triggering Event (as set for more specifically above), and the number of shares reserved by the Company for purposes of this Warrant shall be adjusted by the same proportion. In the event of a proportional adjustment under subparagraphs (a), (b) or (c) or this Section 3.4, no adjustment shall be made in the aggregate purchase price of the Shares then covered by this Warrant, and the per-share Exercise Price shall be adjusted accordingly. All such adjustments shall be made by the Company, whose determination upon the same shall be subject to review and approval by the Center. No fractional Shares shall be issued; and any fractional Share resulting from the computations pursuant to this Section 3.4 shall be rounded up to the next whole share. The Company shall provide thirty (30) days' prior written notice to the Center of a Triggering Event (to the extent legally permissible, but in no case later than five (5) days after the occurrence of a Triggering Event), its effective date, and the proposed adjustment for such Triggering Event.

Section 4. ***Shareholder Rights***. Until the valid exercise of this Warrant, the Center shall not be entitled to any rights of a stockholder with regard to the Shares, but immediately upon the exercise of this Warrant and upon payment of the Exercise Price as provided herein, the Center shall be deemed to be a record holder of the Company's Shares. Notwithstanding the foregoing, and provided the Center agrees in a manner reasonably satisfactory to the Company to maintain in confidence and confidential and proprietary information of the Company, the Company shall provide financial and operating information regarding the Company to the Center annually. In addition, the Center may request financial and operating information regarding the Company with thirty (30) days after its receipt of the each of the notices the Company is required to provide pursuant to Sections 3.3 and 3.4 above.

Section 5. ***Transfer of Warrant***

5.1 **Transfer**. Subject to compliance with applicable state and federal securities laws, and the terms of this Warrant, this Warrant shall be transferable, in whole or in part, by the Center or other holder of record upon surrender of this Warrant properly endorsed.

5.2 **Transferee Obligations**. Any transferee shall represent and warrant to the Company that it will hold this Warrant (or any portion thereof) subject to the provisions and upon the conditions specified herein.

5.3 **New Warrants**. On any transfer referenced in this Section 5, the Company shall issue (as applicable) a new Warrant or Warrants to the transferee (who shall then become a holder of record for all purposes under the terms of this Warrant) and to the Center (in the event the Warrant is only partially transferred) containing the same terms and conditions specified herein. The surrendered Warrant shall thereafter be canceled. Each such transferee shall succeed to all of the rights and assume all obligations of the Center under this Warrant.

Section 6. ***Lost, Stolen, Mutilated or Destroyed Warrant***. If this Warrant is lost, stolen, mutilated, or destroyed, the Company shall, on delivery of an indemnity agreement reasonably satisfactory to the Company (and, in the case of a mutilated Warrant, the surrender thereof), issue a new Warrant of like denomination and tenor as the Warrant so lost, stolen, mutilated or destroyed.

Section 7. ***Notices, etc.*** All notices and other communications required or permitted hereunder shall be in writing and shall be (i) personally delivered, (ii) sent by facsimile (with a copy sent the same day by certified mail, postage prepaid), or (iii) sent Federal Express or other express service addressed: (a) if to the Center, to the Center's address appearing in the records of the Company or such other address as the Center shall have furnished to the Company in writing, (b) if to any other holder of the Warrant, to such address as such holder shall have furnished the company in writing, or, until any such holder so furnishes an address to the Company, then to and at the address of the last holder of the Warrant who has so furnished an address to the Company, or (c) if to the Company, to the company's address appearing in the records of the Center, or at such other address as the Company shall have furnished to the Center and each such other holder in writing. Notice shall be deemed effective on the date dispatched if by personal delivery, on the date transmitted by facsimile (if confirmed by mail pursuant to this Section 7) or two (2) days after mailing if by Federal Express or express service.

Section 8. ***General Provisions***. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning hereof. The provisions of this Warrant are deemed by the parties to be severable, and the unenforceability of any one or more provisions shall not invalidate or make unenforceable the other provisions. The rights, duties, and obligations of the parties shall inure to the benefit of and be binding on their respective successors and assigns. Neither this Warrant nor any term hereof may be changed, waived, discharged, or terminated orally, but only by an instrument in writing signed by the party against which enforcement of the change, waiver, discharge or termination is sought.

Section 9. **Choice of Law.** This Warrant shall be construed and governed by the laws of the State of North Carolina, excepting only its conflict of law principles.

Section 10. ***Acceptance***. Receipt of this Warrant by the Center shall constitute acceptance of and agreement to the foregoing terms and conditions by the parties hereto.

Section 11. ***Entire Agreement.*** This Warrant reflects the complete understanding of the parties and constitutes their entire agreement regarding the subject matter hereof, all prior negotiations, representations, agreements and understanding having been merged herein.

Form 052010

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its duly authorized officers.

HEAT BIOLOGICS, INC.

By: /s/ Jeff Wolf

Printed Name: Jeff Wolf

Title: CEO

Form 052010

Exhibit A

NOTICE OF EXERCISE OF WARRANT

[To be signed only upon exercise of Warrant]

The undersigned, the holder of the within Warrant, hereby (i) irrevocably elects to exercise the right of purchase represented by such Warrant for, and to purchase thereunder, _____ Shares (as that term is defined in the within Warrant) pursuant to the terms of the Warrant, and (ii) hereby elects to make payment in full for the number of Shares so purchased by (a) payment of $_____ cash or cashier's check or, hereby serves notice that $_____ has been credited as payment in principal of the Company's loan from the Center in full payment of the aggregate purchase price for such Shares, or (b) in lieu of the payment of cash, the exchange of the Warrant for a lesser number of Shares as provided in the within Warrant.

The undersigned requests that the certificates for such Shares be issued in the name of, and be delivered to, _____, whose address is _____.

Dated:_____

[HOLDER]

By: _____

Printed Name: _____

Title: _____

Form0908

LICENSE AGREEMENT

This License Agreement (the "Agreement) is entered into and made effective the 11 day of Feb, 2011 (the "Effective Date") between UNIVERSITY OF MIAMI and its School of Medicine, whose principal place of business is at 1600 N.W. 10th Avenue, Miami, Florida 33136 (hereinafter referred to as :LICENSOR") and HEAT BIOLOGICS, INC., A Delaware corporation, whose principal place of business is at Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 33139 (hereinafter referred to as "LICENSEE").

WITNESSETH

WHEREAS HEAT BIOLOGICS, INC., a Delaware Corporation ("HEAT") is the majority shareholder of the LICENSEE. With effect of July 11, 2008, HEAT and the LICENSOR have entered into a license agreement regarding the Podack Cancer Vaccine (UM97-14) which was later assigned to the LICENSEE (hereinafter also referred to herein as the "Podack Cancer Vaccine License Agreement");

WHEREAS LICENSOR is the sole owner of the technology and product identified as the Treatment of Non-small Cell Lung Cancer (UMJ110) technology which is related to the Podack Cancer Vaccine (UM9779-14);

WHEREAS LICENSOR is the sole owner of the patent rights relating to the Treatment of Non-small Cell Lung Cancer (UMJ110) technology;

WHEREAS LICENSOR wishes to exclusively license to LICENSEE the Treatment of Non-small Cell Lung Cancer (UMJ110) technology and patent rights related thereto, and

WHEREAS LICENSEE desires to acquire an exclusive license from LICENSOR to the Treatment of Non-small Cell Lung Cancer (UMJ110) technology and patent rights related thereto for the purpose of commercially marketing the Treatment of Non-small Cell Lung Cancer (UMJ110) technology,

NOW THEREFORRE, For these and other valuable considerations the receipt of which is hereby acknowledged, the parties agree as follows:

1. **DEFINITIONS:**

1.1 "Affiliate" shall mean any corporation or other business entity controlled by, controlling or under common control with LICENSEE. For this purpose, "control" shall mean direct or indirect beneficial ownership of at least a fifty percent (50%) of the voting stock of, or at least a fifty percent (50%) interest in the income of such corporation or other business entity, or such other relationship as in fact, constitutes actual control.

1.2 "Sublicensee" as used in this Agreement shall mean any third party to whom LICENSEE has granted a license to make, have made, use and/or sell the Product under the Patent Rights, provided said third party has agreed in writing with LICENSEE to accept the conditions and restrictions agreed to by LICENSEE in this Agreement.

1.3 "Patent Rights" shall mean the following United States Patent applications: U.S. patent application serial number 61/347.336 entitled "Cancer Treatment" and filed on 21 May 2010, all United States patents and foreign patents and patent applications based on this U.S. application; all divisionals, continuations of the foregoing; and those claims in continuations-in-part of the foregoing that are described in sufficient detail in U.S. patent application serial number 61/347.336 to meet the requirements of 35 U.S.C.112¶1; and any re-examination or reissues of the foregoing.

1.4 "Licensed Product shall mean any product or part thereof which:

(a) is covered in whole or in party by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights; or

(b) is manufactured by using a process which is covered in whole or in party by an issued unexpired, and nonadjudicated unenforceable claim or a pending claim contained in the Patent Rights.

1.5 "Licensed Process: shall mean any process practiced in a country in which said process is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or pending claim contained in the Patent Rights.

1..6 "Net Sale" shall mean the sum of all amounts invoiced on account of sale or use of Licensed Products and Licensed Processes by LICENSEE and its Affiliated or any Sublicensees to non-affiliated third party purchasers or users of Licensed

Products of Licensed Processes, less (a) discounts to purchasers in amounts customary in the trade, (b) amounts for transportation or shipping charges to purchasers, (c) credits for returns, allowances or trades, and (d) taxes and duties levied on the sale of use of Licensed Products, whether absorbed by Licensee or paid by the purchaser.

1.7 "Territory" shall mean worldwide.

1.8 "Field of Use" shall mean all human healthcare and research applications.

1.9 The "Treatment of Non-small Cell Lung Cancer (UMJ110" shall mean the technology described in Appendix A attached hereto.

2. GRANT:

2.1 LICENSOR hereby grants to LICENSEE an exclusive license subject to any rights of the U.S. government specified in section 4 below, in the Territory for the Field of Use, with the right to sublease, under the Patent Rights, to make, have made for its own use and sale , use and sell Licensed Products and Licensed Processes.

2.2 LICENSOR reserves to itself the non-transferable right to make and use Licensed Products and/or Licensed Processes solely for its internal, non-commercial scientific research, not-for-profit clinic research, and educational purposes.

3. TERM:

The license granted by this Agreement shall be exclusive in the licensed Field of Use for a term commencing as of the Effective Date of this Agreement and continue until the expiration, on a country by country basis, of all of the Patent Rights.

4. UNITED STATES LAW

4.1 Licensee understands that the Licensed Subject Matter may have been developed under a funding agreement with the Government of the United States of America and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any agreement and any applicable law or regulation. If there is a conflict between an agreement applicable

law or regulation and this Agreement, the terms of the Government agreement, applicable law or regulation shall prevail.

Specifically, This Agreement is subject to all of the terms and conditions of Title 35 United States Code sections 200 through 204, including an obligation that Licensed Product(s) sold or produced in the United States be "manufactured substantially in the United States," and LICENSEE agrees to take all reasonable action necessary on its part as licensee to enable LICENSOR to satisfy its obligation thereunder, relating to Invention(s).

4.2 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended and the Export Administration Act of 1979), and that its obligations hereunder are contingent of compliance with applicable United States export Laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. LICENSOR neither represents that a license shall not be required nor that, if required, it shall be issued.

5. PATENT PROTECTION AND INFRINGEMENT:

5.1 licensor, DURING THE TERM OF THIS Agreement, is responsible for the filing and prosecution of all patents and applications where LICENSEE shall reimburse LICENSOR for all payments within thirty (30) days of invoice. LICENSOR shall deep LICENSEE fully apprised on the status of all Patent Rights and shall provide LICENSEE the opportunity to make comments and suggestions on all decisions relating to the prosecution of the Patent Rights (e.g., office actions). LICENSOR shall in good faith consider incorporating such comments and suggestions unless such incorporation would be contrary to the purposes of this Agreement.

5.2 LICENSEE shall promptly notify LICENSOR in writing of any claim of Patent Rights infringement which may be asserted against LICENSEE or

LICENSOR, its Affiliates and any sublicensees because of the manufacture, use, promotion and sale of Products.

5.3 LICENSEE shall pay to LICENSOR a license issue fee in the amount of $10,000 and past patent fees within thirty (30) days of the Effective Date. LICENSEE shall also pay to LICENSOR all future patent fees within thirty (30) days after the LICENSEE has received the invoice from LICENSOR pertaining to such future patent fee.

5.4 LICENSEE will defend, indemnify and hold harmless LICENSOR, its trustees, officers, directors, employees and its Affiliates against any and all judgments and damages arising from any and all third party claims of Patent Rights infringement which may be asserted against LICENSOR and Affiliates because of the manufacture, use, promotion and sale of License Products except for the use of Licensed Products and/or Licensed Processes by Licensor pursuant to section 2.2 of this Agreement. LICENSEE will bear all costs and expenses incurred in connection with the defense of any such claims or as a result of any settlement made or judgment rendered on the basis of such claims. LICENSOR shall have no further liability to LICENSEE for any loss or damages LICENSEE may incur as a result of the invalidity of LICENSOR'S Patent Rights. LICENSOR will have the right, but not the obligation to retain counsel and its expense in connection with any such claim. LICENSOR at its option, shall have the right, within thirty days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

5.5 Upon learning of any infringement of Patent Rights by third parties in any country, LICENSEE and LICENSOR will promptly inform each other, as the case may be, in writing of that fact and will supply the other with any available evidence pertaining to the infringement. LICENSEE at its own expense, shall have the option to take whatever steps are necessary to stop the infringement at its expense and recover damages therefore. If requested by LICENSEE, LICENSOR will join in any legal actions enforcing or defending the Patent Rights against third parties deemed necessary or advisable by LICENSEE to prevent or seek damages, or both, from the infringement of the Patent Rights provided that LICENSEE funds all costs associated with such actions, using counsel mutually acceptable for LICENSEE and LICENSOR, and indemnifies and holds

LICENSOR harmless with respect to any claims or damages made against of sustained by LICENSOR in connection with such involvement. In the event that LICENSOR and LICENSEE mutually bring suit, costs and expenses shall be borne by LICENSEE, and any recovery shall be shared by the parties as if such infringing sales were Net Sales. In any event, no settlement, consent, judgment or other voluntary final disposition of the suit may be entered into without the consent of LICENSOR, which shall not be unreasonably withheld. In the event LICENSEE does not take steps to stop the infringement, LICENSOR shall have the right to bring suit at its own expense. In such event, financial recoveries will be entirely retained by LICENSOR.

5.6 LICENSOR shall have no responsibility with respect to LICENSEE'S own trademarks and trade name, and LICENSEE in respect to the use thereof will defend, indemnify and hold harmless LICENSOR against any and all third party claims.

6. INDEMNIFICATION:

6.1 LICENSEE agrees to release, indemnify and hold harmless the LICENSOR, its trustees, officers, faculty, employees and students against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSOR, its trustees, officers, faculty, employees and students as a result of or arising out of use, production, manufacture, sale, lease, consumption or advertisement by LICENSEE or any Sublicensee of any Licensed Product, Licensed Process, or Licensed Materials covered by this Agreement.

6.2 LICENSOR agrees to release, indemnify and hold harmless the LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and agents against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSEE, its directors, officers, employees, Affiliate, Sublicenses and/or agents as a result of or arising out of any willful misconduct or negligent act or omission of LICENSSOR.

6.3 This Agreement to reimburse and indemnify under the circumstances set forth above shall continue after the termination of this Agreement.

7. REPRESENTATION/WARRANTIES:

7.1 LICENSOR hereby represents and warrants to LICENSEE that LICENSOR owns the Patent Rights and has not assigned any rights therein or given any license or other rights thereto to any party other than LICENSEE.

7.2 LICENSOR hereby represents and warrants that, although it has not conducted any investigation, it has no knowledge of any patents or patent applications other than the Patent Rights, that contain a claim that would be infringed by the sale or use of a Licensed Product or Licensed Process.

7.3 EXCEPT AS PROVIDED ABOVE, LICENSOR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL SUCH WARRANTIES, AS TO ANY MATTER WHATSOVER, INCLUDING WITHOUT LIMITATION, THE CONDITION OR ANY INVENTION(S) OR PRODUCT WHETHER TANGIBLE OR INTANGIBLE, LICENSED UNDER THIS AGREEMENT, OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE INVENTION OR PRODUCT, OR THAT THE USE OF THE LICENSED PRODUCT WILL NOT INFRINGE ANY PATENT, COPYRIGHTS, TRADEMARKS, OR OTHER RIGHTS, OTHER THAN FOR BREACH OF THE ABOVE WARRANTIES, OR ITS OWN NEGLIGENT ACTS OR OMISSION, LICENSOR SHALL NOT BE LIABLE FOR ANY DIRECT, CONSEQUENTIAL, OR OTHER DAMAGES SUFFERED BY ANY LICENSEE OR ANY THIRD PARTIES RESULTING FROM THE USE, PRODUCTION, MANUFACTURE, SALE, LEASE, CONSUMPTION, OR ADVERTISEMENT OF THE PRODUCT.

7.4 EXCEPT EXPLICITLY PROVIDED FOR HEREIN, LICENSEE DOES NOT MAKE ANY OTHER RESPRESENTATIONS OR GIVE ANY OTHER EXPLICIT OR IMPLICIT WARRANTIES. TO THE FULLEST EXTENT PERMITTED BY LAW LICENSEE HEREBY DISCLAIMS ANY OTHER REPRESENTATIONS AND WARRANTIES.

7.5 The provisions of this Section shall continue beyond the termination of this Agreement.

8. ROYALTIES:

8.1 In consideration of the license herein granted, LICENSEE shall pay royalties to LICENSOR as follows:

(a) LICENSEE agrees to pay to LICENSOR license issue fee of $10,000 and past patent fees within thirty (30 days of the Effective Date as well as any future patent fees as set out in section 5.3 of this Agreement.

(b) LICENSEE agrees to pay to LICENSOR as earned royalties a royalty calculated as a percentage of LICENSEE;S Net Sales of Licensed Products which, if not for this Agreement, would infringe the Patent Rights, in accordance with the terms and conditions of this Agreement. The royalty is deemed earned as of the earlier of the date the Licensed Product and/or Licensed Process is actually sold and paid for, the date an invoice is sent by LICENSEE, or the date a Licensed Product and/or Licensed Process is transferred to a third party for any promotional reasons. The royalty shall remain fixed while this Agreement is in effect at a rate of XXXX percent (XXXX%) of Net Sales.

(c) For a sublicense, LICENSEE shall pay to LICENSOR an amount equal to XXXX percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee. In addition, if LICENSEE receives any fees, minimum royalties, or other payments in consideration for any rights granted under a Sublicense, and such payments are not based directly upon the amount or value of Licensed Products or Licensed Processes sold by the Sublicensee nor represent payment of costs to LICENSEE for a development program which LICENSEE is obligated to perform under such

Sublicense, then LICENSEE shall pay LICENSOR XXXX percent (XXXX%) of such payments.

(d) In the event that licenses from third parties are required by LICENSEE in order to make, have made, use, sell, offer to sell or import any particular Licensed Product of Licensed Process, then the earned royalty which LICENSEE is obligated to pay LICENSOR under this Agreement shall be reduced by XXXX ($XXXX) for each one dollar ($1.00) in royalties which Licensee is obligated to pay to third parties under such licenses, further provided, however, that the royalties payable to LICENSOR under this Section shall not be reduced to less than XXXX percent (XXXX%) of the applicable Net Sales.

(e) In the event that LICENSEE requires more than one license from the LICENSOR to make, have made for its use, sell, offer to sell or import any particular Licensed Product of Licensed Process as defined in sections 1.5 and 1.6, respectively, of this Agreement, then the combined earned royalties shall not exceed XXXX% of Net Sales and any sublicense fees shall not exceed XXXX percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee.

8.2 All payments shall be made hereunder in U.S. dollars, provided however, that if the proceeds of the sale upon which such royalty payments are based are received by the LICENSEE in a foreign currency or other form that is not convertible or exportable in dollars, and the LICENSEE does not have ongoing business operations or bank accounts in the country in which the currency is not convertible or exportable, the LICENSEE shall pay such royalties in the currency of the country in which such sales were made by depositing such royalties in LICENSOR'S name in a bank designated by LICENSOR in such country. Royalties in U.S. dollars shall be computed by converting the currency of the country in which the sales were made at the exchange rate for U.S. dollars prevailing at the close of the business day of the

LICENSEE'S quarter for which royalties are being calculated as published in the following day in the Wall Street Journal (or, if it ceases to be published, a comparable publication to be agreed upon from time to time by the parties), and with respect to those countries for which rates are not published in the Wall Street Journal, the exchange rate fixed for such date by the appropriate United States governmental agency.

8.3 In the event the royalties set forth herein are higher than the maximum royalties permitted by the law or regulations of a particular country, the royalty payable for sales in such country shall be equal to the maximum permitted royalty under such Law or regulation.

8.4 In the event that any taxes, withholding or otherwise, are levied by any taxing authority in connection with accrual or payment of any royalties payable to LICENSOR under this Agreement, the LICENSEE shall have the right to pay such taxes to the local tax authorities on behalf of LICENSOR and the payment to LICENSOR of the net amount due after reduction by the amount of such taxes, shall fully satisfy the LICENSEE'S royalty obligations under this Agreement.

9, DILIGENCE:

9.1 LICENSEE shall use efforts at least sufficient to meet the requirements of the Bayh-dole Act to manufacture, market and sell the Licensed Products in the Territory, and to create a demand for the Products.

9.2 LICENSEE agrees to submit reports, upon LICENSOR'S request but no more than every 6 months as to its efforts to develop markets for the Licensed Products. Such reports shall include assurance by LICENSEE of its intent to actively develop commercial embodiments of Licensed Products and a summary of its efforts in this regard.

9.3 Unless LICENSEE has introduced a Licensed Product into the commercial marketplace in one of the three major markets (European Union, Japan and the United States) or has made best efforts (for avoidance of doubt it will be presumed that LICENSEE has used best efforts if it has a Licensed Product in a phase III clinical trial) to achieve the same prior to December 31, 2020. LICENSEE agrees that LICENSOR may terminate this Agreement by providing LICENSEE ninety (90) advanced written notice of its intent to terminate this Agreement. In the event the payment of earned royalties once

Begun and if any are due, ceases for more than two (2) calendar quarters, and LICENSEE fails to cure this breach within two (2) months after being provided written notice of same, LICENSOR may terminate this Agreement.

10. REPORTS AND RECORDS:

10.1 Commencing one (1) year after the first sale, the LICENSEE shall furnish to LICENSOR a report in writing specifying during the preceding calendar quarter (a) the number or amount of Licensed Products sold hereunder by LICENSEE and/or its Affiliate or Sublicensees, (b) the total billings for all Licensed Products sold, (c) deductions as applicable in paragraph 1.6, (d) total royalties due, (e) names and addresses of all Sublicensees. Such reports shall be due within forty-five (45) days following the last day of each calendar quarter in each year during the term of this Agreement. Each such report shall be accompanied by payment in full of the amount due LICENSOR in United States dollars calculated in accordance with Section 8 hereof.

10.2 For a period of three (3) years from the date of each report pursuant to Paragraph 10.1, LICENSEE shall keep records adequate to verify each such report and accompanying payment made to LICENSOR under this Agreement and an independent certified public accountant or accounting firm selected by LICENSOR and acceptable to LICENSEE may have access on reasonable notice during regular business hours, not to exceed once per year, to such records to verify such reports and payments. Such accountant or accounting firm shall not disclose to LICENSOR any information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the certified public accounting or accounting firm performing such verification shall be borne by LICENSOR unless in the event that the audit reveals an underpayment of royalty by more than ten (10%) percent, the cost of the audit shall be paid by LICENSEE.

11. MARKING AND STANDARDS:

11.1 LICENSEE agrees to mark and have sublicensees mark Licensed Products (or their containers of labels) made, sold, or otherwise disposed of by it under the

license granted in this Agreement with a proper patent notice as specified under the patent Laws of the United States.

11.2 LICENSEE further agrees to maintain satisfactory standards in respect to the nature of the Licensed Products manufactured and/or sold by LICENSEE. LICENSEE agrees that all Licensed Products manufactured and/or sold by it shall be of a quality which is appropriate to products of the type here involved. LICENSEE agrees that similar provisions shall be included in sublicenses of all tiers.

12. ASSIGNMENT:

12.1 This Agreement is not assignable by LICENSEE or by operation of Law without the prior written consent of LICENSOR at is sole discretion except that LICENSEE shall have the right to transfer or assign the Agreement to any entity which acquires all or substantially all of LICENSEE'S assets provided that LICENSEE gives LICENSOR thirty (30) days advance written notice of the intended assignment and considers in good faith any of LICENSOR's concerns relating to the intended assignment. The foregoing sentence shall not be construed to require LICENSEE to obtain LICENSOR"s approval of any Sublicensee

12.2 This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of LICENSOR and LICENSEE.

13. NOTICE:

Any notice, payment, report or other correspondence (hereinafter collectively referred to as "correspondence") required or permitted to be given hereunder shall be mailed by certified mail or delivered by hand to the party to whom such correspondence is required or permitted to be given hereunder. If mailed, any such notice shall be deemed to have been given when mailed as evidenced by the postmark at point of mailing. If delivered by hand, any such correspondence shall be deemed to have been given when received by the party to whom such correspondence is given, as evidenced by written and dated receipt of the receiving party.

All correspondence to LICENSEE shall be addressed as follows:

Mr. Jeffrey Wolf
CEO
Heat Biologics, Inc.
Atlantic Center
119 Washington Avenue, Suite 401
Miami Beach, FL 33139

All correspondence to LICENSOR shall be addressed, in duplicate, as follows:

FOR NOTICE:

Assistant Vice President
Treasurer
327 Max Orovitz Building
1507 Levante Avenue
Coral Gables, Florida 33124-1432
Attention: Mr. Alan J. Fish

FOR NOTICE AND PAYMENT:

Office of Technology Transfer
1475 NW 12th Avenue
Sewell building Room 2012
Miami, FL 33136

Either party may change the address to which correspondence to it is to be addressed by notification as provided herein.

14. TERMINATION:

14.1 A party shall have the right to terminate this Agreement if the other party commits (a) a material breach of an obligation under this Agreement or (b) provides a

false report, and continues in breach for more than ninety (90) days after receiving unambiguous written notice of such breach or false report; however, in the event LICENSEE breaches its obligations under Section five (5) or eight (8) above, LICENSEE shall have thirty (30) days after receiving written notice to cure such breach, after which LICENSOR shall have the right to terminate this Agreement. Such termination shall be effective upon further written notice to the breaching party after failure by the breaching party to cure such default.

14.2 The license and rights granted in this Agreement have been granted on the basis of the special capability of LICENSEE to perform research and development work leading to the manufacture and marketing of the Products. Accordingly, LICENSEE covenants and agrees that in this event any proceedings under the Bankruptcy Act or any amendment thereto, be commenced by or against LICENSEE and, if against LICENSEE, said proceedings shall not be dismissed with prejudice before either an adjudication in bankruptcy or the continuation or a composition, arrangement, or plan of reorganization, or in the event LICENSEE shall be adjudged insolvent or make an assignment for the benefit of its creditors, or if a writ of attachment or execution be levied upon the license hereby created and not be released or satisfied within ten (10) days thereafter, or if a receiver be appointed in any proceeding or action to which LICENSEE is a party with authority to exercise any of the rights or privileges granted hereunder and such receiver be so discharged within a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by LICENSEE and LICENSOR, at the election of LICENSOR, but not otherwise, ipso facto, and without notice or other action by LICENSOR, shall terminate this Agreement and all rights of LICENSEE hereunder and all rights of any and all persons claiming under LICENSEE.

14.3 LICENSEE shall have the right to terminate this Agreement by providing ninety (90) days written notice of its intent to terminate this Agreement to LICENSOR.

14.4 Any termination of this Agreement shall be without prejudice to LICENSOR's rights to recover all amounts accruing to LICENSOR prior to such termination and cancellation. Except as otherwise provided, should this Agreement be terminated for any reason, LICENSEE shall have no rights, express or implied, under any

patent property which is the subject matter of this Agreement, nor have the right to recover any royalties paid LICENSOR hereunder. Upon termination, LICENSEE shall have the right to dispose of Licensed Products then in their possession and to complete existing contracts for such products, so long as contracts are completed within six (6) months from the date of termination, subject to the payment of royalties to LICENSOR as provided in Section 8 hereof.

15. CERTIFICATE OF INSURANCE:

15.1 LICENSEE shall maintain liability insurance coverage for the Product in the amount of XXXX dollars ($XXXX) and at no expense to LICENSOR, LICENSEE shall name LICENSOR as an additional insured. Within fourteen (14) days of execution of this Agreement, LICENSEE shall provide a certificate of insurance to LICENSOR. LICENSEE agrees to pay and keep in force, at its expense, general liability insurance with limits not less than XXXX per person, and XXXX aggregate to cover liability for damages on account of bodily or personal injury or death to any person or damage to property of any person. Such insurance shall contain an endorsement naming the University of Miami as an additional insured with respect to the Agreement. Insurance Certificates should be sent to the University of Miami upon execution of this Agreement and on the anniversary of that date every year thereafter, Office of Technology Transfer, 1475 NW 12 th Avenue, Sewell Building Room 2012, Miami, Florida 33136

15.2 Licensee shall not cancel such insurance without thirty (30) days prior notice to Licensor. Such cancellation shall be cause for termination.

15.3 The terms of this provision shall extend beyond termination of this agreement.

16. USE OF NAME:

LICENSEE shall not use the name of the University of Miami, or any of its employees, or any adaptation thereof, in any publication, including advertising, promotional or sales literature without the prior written consent of Mr. Humberto Speziani, Assistant Vice President, 327 Max Orovitz Bldg., 1507 Levante Avenue, Coral Gables FL

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

33124-1432. LICENSOR shall notify LICENSEE within ten (10) days of being provided notice of its decision regarding each instance of intended us of name(s) (name(s). The absence of a response by LICENSOR within this ten (10) days period shall constitute implied permission for LICENSEE to use such name in that instance. Any press releases concerning this Agreement must be mutually agreed upon by the parties.

17. GOVERNING LAW:

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Florida. Any dispute arising out of this Agreement shall be heard in a court of competent jurisdiction located in Miami-Dade County, Florida.

18. CAPTIONS:

The captions and paragraph heading of this Agreement are solely for the convenience of reference and shall not affect its interpretation.

19. SEVERABILITY:

Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in valid and enforceable manner, and the remainder of the Agreement shall remain binding upon the parties hereto.

20. SURVIVAL:

20.1 The provision of Sections 5, 6 and 7 shall survive the termination or expiration of this Agreement and shall remain in full force and effect.

20.2 The provisions of this Agreement which do not survive termination or expiration hereof (as the case may be) shall, nonetheless, be controlling on, and shall be used in construing and interpreting the rights and obligations of the parties hereto with regard to any dispute, controversy or claim which may arise under, out of, in connection with or relating to this Agreement.

21. AMENDMENT:

No amendment or modification of the terms of this Agreement shall be binding on either party unless reduced to writing and signed by an authorized officer of the party to be bound.

22. WAIVER:

No failure or delay on the part of a party in exercising any right hereunder will operate as a waiver of, or impair, any such right. No single or partial exercise of any such right will preclude any other or further exercise thereof or the exercise of any other right. No waiver of any such right will be deemed a waiver of any other right hereunder.

23. CONFIDENTIALITY:

Each party shall maintain all information of the other party which is treated by such other party as proprietary or confidential (referred to herein as "Confidential Information") in confidence, and shall not disclose, divulge or otherwise communicate such confidential information to others, or use it for any purpose, except pursuant to and in order to carry out the terms and objectives of this Agreement, and each party hereby agrees to exercise every reasonable precaution by any of its Affiliates, directors, officers, employees, consultants, subcontractors, sublicensees or agents. LICENSEE'S Confidential Information includes but is not limited to the development plan, development reports and all other financial and business reports, strategies, and agreements (including sublicenses) of LICENSEE. The parties agree to keep the terms of this Agreement confidential, provided that each party may disclose this Agreement to their authorized agents and investors who are bound by similar confidentiality provisions. Notwithstanding the foregoing, Confidential Information of a party shall not include information which: (a) was lawfully known by the receiving party prior to disclosure of such information by the disclosing party to the receiving party; (b) was or becomes generally available in the public domain, without the fault of the receiving party; (c) is subsequently disclosed to the receiving party by a third party having a

Lawful right to make such disclosure, (d) is required by law, rule, regulation, or legal process to be disclosed, provided that the receiving party making such disclosure shall take all reasonable steps to restrict and maintain to the extent possible confidentiality of such disclosure and shall provide reasonable notice to the other party to allow such party the opportunity to oppose the required disclosure, or (e) has been independently developed by employees or others on behalf of the receiving party without access to or use of disclosing party's information as demonstrated by written record. Each party's obligations under this Section shall extend for a period of five (5) years from termination or expiration of this Agreement.

24. UNIVERSITY RULES AND REGULATIONS:

LICENSEE understands and agrees that University of Miami personnel who are engaged by LICENSEE, whether as consultants, employees or otherwise, or who possess a material financial interest in LICENSEE, are subject to the University of Miami's rule regarding outside activities and financial interests, and the University of Miami's Intellectual Property Policy. Any term or condition of an agreement between LICENSEE and such University of Miami personnel which seeks to vary or override such personnel's obligations to the University of Miami may not be enforced against such personnel, or the University of Miami without the express written consent of any individual authorized to vary or waive such obligations on behalf of the University of Miami.

25. ENTIRE AGREEMENT:

This Agreement including its Appendices constitutes the entire agreement between the parties hereto respecting the subject matter hereof, and supersedes and terminates all prior agreements respecting the subject matter hereof, whether written or oral, and may be amended only by an instrument in writing executed by both parties hereto.

26. CONTRACT INFORMATION AND AUTHORITY:

LICENSOR and LICENSEE each warrant and represent that the persons signing this Agreement on its behalf have authority to execute this Agreement and that the execution of this Agreement does not violate any law, rule or regulation applicable to it or any contract or other agreement by which it is bound.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

HEAT BIOLOGICS, INC.

Date: 2/18/11 By: /s/ Jeffrey Wolf

Jeffrey Wolfe
Name

CEO
Title

UNIVERSITY OF MIAMI

Date: 2/14/11 By: /s/ Humberto M. Speziani

Humberto M Speziani
Name

Assistant Vice President
Finance
Title

LICENSE AGREEMENT

This License Agreement (the "Agreement") is entered into and made effective the 11th day of July, 2008 (the "Effective Date") between UNIVERSITY OF MAIMI and its School of Medicine, whose principal place of business is at 100 N.W. 10th Avenue, Miami Florida 33136 (hereinafter referred to as "LICENSOR") and HEAT BIOLOGICS, INC., a Delaware corporation whose principal place of business is at Atlantic Center, 199 Washington Avenue, Suite 401, Miami Beach FL 33139 (hereinafter referred to as "LICENSEE").

WITNESSETH

WHEREAS LICENSOR is the sole owner of the technology and product identified as the Podack Cancer Vaccine (UM97-14):

WHEREAS LICENSOR is the sole owner of the patent rights relating to the Podack Cancer Vaccine (UM97-14) technology:

WHEREAS LICENSOR wishes to exclusively license to LICENSEE the Podack Cancer Vaccine (UM97-14) technology and patent rights related thereto: and

WHEREAS LICENSEE desires to acquire an exclusive license from LICENSOR to the Podack Cancer Vaccine (UM97-14) technology and patent rights related thereto for the purpose of commercially marketing the Podack Cancer Vaccine (UM97-14) technology.

NOW THEREFORE, For these and other valuable considerations, the receipt of which is hereby acknowledged, the parties agree as follows:

1. DEFINITIONS:

1.1 "Affiliate" shall mean any corporation or other business entity controlled by, controlling or under common control with LICENSEE. For this purpose, "control" shall mean direct or indirect beneficial ownership of at least fifty percent (50%) of the voting stock of, or at least a fifty percent (50%) interest in the income of such

corporation or other business entity, or such other relationship as in fact, constitutes actual control.

1.2 "Sublicensee" as used in this Agreement shall mean any third party to whom LICENSEE has granted a license to make, have made, use and or sell the Product under the Patent Rights, provided said third party has agreed in writing with LICENSEE to accept the conditions and restrictions agreed to by LICENSEE in this Agreement.

1.3 "Patent Rights" shall mean the following United States Patent applications: U.S. provisional patent application serial number 60/075.358 entitled "Modified Heat Shock Protein-antigenic Peptide Complex" and filed on February 20, 1998: U.S. patent application serial number 09 253.439 entitled "Modified Heat Shock Protein-Antigenic Peptide Complex" and filed on February 19, 1999: U.S. patent application serial number 11/878.460 entitled "Recombinant Cancer Cell Secreting Modified Heat Shock Protein-antigenic Peptide Complex" and filed on July 24, 2008: all United States patents and foreign patents and patent applications based on these U.S. applications: all divisionals, continuations of the foregoing: and those claims in continuations-in-part of the foregoing that are described in sufficient detail in U.S. provisional patent applications serial number 60/075.358. U.S. Patent application serial number 09 253.439, or U.S. patent application serial number 11/878.460 to meet the requirements of 35 U.S.C. 112¶1; and any re-examinations or reissues of the foregoing. "Patent Rights" shall not include Excluded Patent Rights.

1.4 "Excluded Patent rights" shall mean United States Patent Application number 10/923.373: all divisionals, continuations of the foregoing: and those claims in continuations-in-part of the foregoing that are described in sufficient detail in United States Patent Application number 10/923.373 to meet the requirements of 35 U.S.C. 112¶1: and any re-examinations or reissues of the foregoing.

1.5 "Licensed Product" shall mean any product or part thereof which:

(a) is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights:

(b) is manufactured by using a process which is covered in whole or in party by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights: or

(c) incorporated or comprises the Podack Cancer Vaccine (UM97-14) or the cell line "AD100-gp96/III.A".

1.6 "Licensed Process" shall mean any process practiced in a country in which said process is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or pending claim contained in the Patent Rights.

1.7 "Net Sales" shall mean the sum of all amounts invoiced on account of sale or use of Licensed Products and Licensed Processes by LICENSEE and its Affiliates of any Sublicensees to non-affiliated third party purchasers or users of Licensed Products of Licensed Processes, less (a) discounts to purchasers in amounts customary in the trade. (b) amounts for transportation or shipping charges to purchasers. (c) credits for returns, allowances or trades, and (d) taxes and duties levied on the sale or use of Licensed Products. Whether absorbed by Licensee or paid by the purchaser.

1.8 "Territory" shall mean worldwide

1.9 "Field of Use" shall mean all human healthcare and research applications.

1.10 The "Podack Cancer Vaccine (UM97-14)" technology shall mean the technology described in Appendix A attached hereto.

1.11 "Licensed Materials" shall mean any modified AD100 cell lines that have been engineered to secrete gp96.

1.12 "Improvements" shall mean any new patentable methods of using the Podack Cancer Vaccine (UM97-14) to treat cancer made by LICENSOR while conducting the clinical trial SCCC2002041: Novel Tumor Vaccine gp96-Ig Fusion Protein in Advance (Stage IIIB), Relapsed or Metastatic (Stage IV Non-small Cell Lung Cancer. NSC1.C) Patients Who have Failed First Line Chemotherapy (IND10940) that would infringe a claim in U.S. provisional patent application serial number 60 075.358.U.S. patent application serial number 09 253.439: U.S. patent application serial number 11/878.460: all United States patents and foreign patents and patent applications based on

these U.S. applications: all divisionals, and continuations of the foregoing: or any re-examinations or reissues of the foregoing.

2. GRANT:

2.1 LICENSOR hereby grants to LICENSEE and exclusive license. Subject to any rights of the U.S. government specified in section 4 below, in the Territory for the Field of Use, with the right to sublicense, under the Patent Rights, to make, have made for its own use and sale, use and sell Licensed Products and Licensed Processes. No rights to US Patent Application Serial Number 10/923.373 is being granted.

2.2 LICENSOR also hereby grants to LICENSEE an exclusive license to make. use. and/or sell the Licensed Materials in the Territory for Field of Use. At LICENSEE's request, LICENSOR shall provide LICENSEE with a reasonable amount of Licensed Materials so that LICENSEE may reproduce such Licensed Materials for the purpose of making, selling, or using Licensed Products or Licensed Processes.

2.3 LICENSOR reserves to itself the non-transferable right to make and use Licensed Materials. Licensed Products and/or Licensed Processes solely for its internal. non-commercial: scientific research, not-for profit clinical research, and educational purposes. Except to the extent required by law. LICENSOR shall not transfer the Licensed Materials or the AD100 cell line for the purpose of making the Licensed Materials to any third party to not use or further distribute such materials for commercial purposes. LICENSOR shall notify LICENSEE in writing of any third party request for such materials and provide LICENSEE at least ten (10) days to object to such request on the basis that such transfer would interfere with the objectives of this Agreement.

2.4 LICENSOR grants to LICENSEE: a six (6) month exclusive option to negotiate a worldwide royalty-bearing, exclusive license with right to sublicense for any Improvement. The specific terms of said license to be negotiated in good faith by the parties taking into account the terms and purpose of this Agreement. To preserve the patent rights in each Improvement, at LICENSEE's request and sole expense. LICENSOR

shall file a patent application for each Improvement prior to the expiration of the confidentiality period specified in section 10.3.

3. TERM:

The license granted by this Agreement shall be exclusive in the licensed Field of Use for a term commencing as of the effective date of this Agreement and continue until the expiration, on a country by country basis. of all of the Patent Rights.

4. UNITED STATES LAWS:

4.1 Licensee understands that the Licensed Subject Matter may have been developed under a funding agreement with the Government of the United States of America and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any agreement and any applicable law or regulation. If there is a conflict between an agreement, applicable law or regulation and this Agreement, the terms of the Government agreement, applicable law or regulation shall prevail.

Specifically. This Agreement is subject to all of the terms and conditions of Title 35 United States Code sections 200 through 204, including an obligation that Licensed Product(s) sold or produced in the United States be "manufactured substantially in the United States," and LICENSEE agrees to take all reasonable action necessary on its part as licensee to enable LICENSOR to satisfy its obligation thereunder, relating to Inventions(s).

4.2 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act. as amended and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign

countries without prior approval of such agency. LICENSOR neither represents that a license shall not be required nor that. if required. it shall be issued.

5. PATENT PROTECTION AND INFRINGEMENT:

5.1 LICENSOR. during the term of this Agreement, is responsible for the filing and the prosecution of all patents and applications where LICENSEE shall reimburse LICENSOR for all payments within thirty (30) days of invoice. LICENSOR shall keep LICENSEE fully apprised on the status of all Patent Rights and shall provide LICENSEE the opportunity to make comments and suggestions on all decisions relating to the prosecution of the Patent Rights (e.g.. office actions). LICENSOR shall in good faith consider incorporating such comments and suggestions unless such incorporation would be contrary to the purposes of this Agreement.

5.2 LICENSEE shall promptly notify LICENSOR in writing of any claim of Patent Rights infringement which may be asserted against LICENSEE or LICENSOR, its Affiliates and any sublicensees because of the manufacture, use, promotion and sale of Products.

5.3 LICENSEE shall pay to LICENSOR in the amount of $25,000 on or before May 31, 2009. another payment in the amount of $25,000 on or before May 31, 2010, which sum represents about 50% costs of preparation, filing, prosecution, issuance, and maintenance of the Licensed Patents incurred prior to the Effective Date.

5.4 LICENSEE will defend, indemnify and hold harmless LICENSOR, its Trustees, officers. Directors, employees, and its Affiliates against any and all judgments and damages arising from any and all third party claims of Patent Rights infringement which may be asserted against LICENSOR, and Affiliates because of the manufacture, use, promotions and sale of Licensed Products. LICENSEE will bear all costs and expenses incurred in connection with the defense of any such claims or as a result of any settlement made or judgment rendered on the basis of such claims. LICENSOR shall have no further liability to LICENSEE for any loss of damages LICENSEE may incur as a result of the invalidity of LICENSOR'S Patent Rights. LICENSOR will have the right, but not the obligation to retain counsel at its expense in connection with any such claim.

LICENSOR at its option, shall have the right, within thirty days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

5.5 Upon learning of any infringement of Patent Rights by third parties in any country. LICENSEE and LICENSOR will promptly inform each other. as the case may be, in writing of that fact and will supply the other with any available evidence pertaining to the infringement. LICENSEE at its own expense, shall have the option to take whatever steps are necessary to stop the infringement at its expense and recover damages therefore. If requested by LICENSEE, LICENSOR will join in any legal actions enforcing or defending the Patent Rights against third parties deemed necessary or advisable by LICENSEE to prevent or seek damages, or both, from the infringement of the Patent Rights provided that LICENSEE funds all costs associated with such actions, using counsel mutually acceptable to LICENSEE and LICENSOR, and indemnified and holds LICENSOR harmless with respect to any claims or damages made against of sustained by LICENSOR in connection with such involvement. In the event that LICENSOR and LICENSEE mutually bring suit, costs and expenses shall be borne by LICENSEE and any recovery shall be shared by the parties as if such infringing sales were Net Sales. In any event, no settlement, consent, judgment or other voluntary final disposition of the suit may be entered into without the consent of LICENSOR, which shall not be unreasonably withheld. In the event LICENSEE does not take steps to stop the infringement, LICENSOR shall have the right to bring suit at its own expense. In such event, financial recoveries will be entirely retained by LICENSOR.

5.6 LICENSOR shall have no responsibility with respect to LICENSEE'S own trademarks and tradename. and LICENSEE in respect to the use thereof will defend, indemnify and hold harmless LICENSOR against any and all third party claims.

6. INDEMNIFICATION:

6.1 Licensee agrees to release, indemnify and hold harmless the LICENSOR, its trustees, officers, faculty, employees, Affiliates, agents and students against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought

against LICENSOR, its trustees, officers, faculty, employees, Affiliates, agents and/or students as a result of or arising out of any willful misconduct or negligent act or omission of LICENSEE, its agents, or employees, or arising out of use, production, manufacture, sale, lease, consumption or advertisement by LICENSEE or any third party, including any Sublicensee of any Licensed Product, Licensed Patent, Licensed Process, or Licensed Materials covered by this Agreement.

6.2 LICENSOR agrees to release and hold harmless the LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and agents against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and/or agents as a result of or arising out of any willful misconduct, or negligent act or omission of LICENSOR.

6.4 This Agreement to reimburse and indemnify under the circumstances set forth above shall continue after the termination of this Agreement.

7. REPRESENTATIONS/WARRANTIES:

7.1 LICENSOR hereby represents and warrants to LICENSEE that LICENSOR owns the Patent Rights and Licensed Materials and has not assigned any rights therein or given any license or other rights thereto to any party other than LICENSEE.

7.2 LICENSOR hereby represents and warrants that, although it has not conducted any investigation, it has no knowledge of any patents or patent applications, other than the Patent Rights, that: contain a claim that would be infringed by the sale or use of a Licensed Product, Licensed Process, or Licensed Materials.

7.3 EXCEPT AS PROVIDED ABOVE. LICENSOR MAKES NO WARRANTIES. EXPRESS OR IMPLIED. AND HEREBY DISCLAIMS ALL SUCH WARRANTIES, AS TO ANY MATTER WHATSOEVER. INCLUDING. WITHOUT LIMITATION, THE CONDITION OF ANY INVENTION(S) OR PRODUCT. WHETHER TANGIBLE OR INTANGIBLE. LICENSED UNDER THIS AGREEMENT: OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE INVENTION OR PRODUCT, OR THAT THE USE OF THE LICENSED

PRODUCT WILL NOT INFRINGE ANY PAATENT, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS. LICENSOR SHALL NOT BE LIEABLE FOR ANY DIRECT, CONSEQUENTIAL, OR OTHER DAMAGES SUFFERED BY ANY LICENSEE OR ANY THIRD PARTIES RESULTING FROM THE USE, PRODUCTION, MANUFACTURE, SALE, LEASE, CONSUMPTION, OR ADVERTISEMENT OF THE PRODUCT.

7.4 The parties acknowledge that LICENSOR has licensed U.S. patent application serial no. 10/923.373 to a third party.

7.5 The provisions of this Section shall continue beyond the termination of this Agreement.

8. ROYALTIES:

8.1 In consideration of the license herein granted, LICENSEE shall pay royalties to LICENSOR as follows:

(a) LICENSEE agrees to pay LICENSOR a license issue fee of $150,000 within thirty (30) days of the Effective Date. LICENSOR agrees that $50,000 of which will go to support Dr. Eckhart Podack's research at the University of Miami to further advance the Patent Rights.

(b) LICENSEE agrees to pay LICENSOR minimum royalty payments as follows:

Payment	Year
$10,000	2010
$10,000	2011
$10,000	2012
$20,000	2013 and every year thereafter on the same date, for the life of this Agreement.

The minimum royalty shall be paid for each year in which this Agreement is in effect. The minimum royalty payment shall be due on or before May 31 of the calendar year. Any minimum royalty paid in a calendar year will be credited against the earned royalties for that calendar year. It is understood that the minimum royalties will be applied to earned royalties on a calendar year basis. and that sales of Licensed Products and or Licensed Processes requiring the payment of earned royalties made during a prior or subsequent calendar year shall have no effect on the annual minimum royalty due LICENSOR for other than the same calendar year in which the royalties were earned.

(c) LICENSEE agrees to pay to LICENSOR as earned royalties a royalty calculated as a percentage of LICENSEE's Net Sales of Licensed Products which, if not for this Agreement, would infringe the Patent Rights, in accordance with the terms and conditions of this Agreement, the royalty is deemed earned as of the earlier of the date the Licensed Product and/or Licensed Process is actually sold and paid for, the date and invoice is sent by LICENSEE, or the date a Licensed Product and/or Licensed Process is transferred to a third party for any promotional reasons. The royalty shall remain fixed while this Agreement is in effect at a rate of XXXX percent (XXXX%) of Net Sales.

(d) For a sublicense. LICENSEE shall pay to LICENSOR an amount equal to XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee. In addition, if LICENSEE receives any fees, minimum royalties, or other payments in consideration for any rights granted under a Sublicense, and such payments are not based directly upon the amount or value of Licensed Products or Licensed Processes sold

by the Sublicensee nor represent payment of costs to LICENSEE for a development program which LICENSEE is obligated to perform under such sublicense, then LICENSEE shall pay LICENSOR XXXX percent (XXXX%) of such payments.

(e) In addition to all other payments required under this Agreement, LICENSEE agrees to pay LICENSOR milestone payments as follows:

Payment	Event
$250,000	By the earlier of May 31, 2017 or the approval of an NDA for a lung cancer vaccine or for a cancer vaccine other than lung cancer vaccine covered by the Patent Rights

Furthermore, LICENSEE agrees to hire or retain a regulatory expert no later than September 1, 2008 to handle the documentation and dealing with FDA on all regulatory and clinical matters regarding the Licensed Patents. Licensed Product and/or Licensed Process, to the extent permitted by the rules of FDA and provisions governing IND.

(f) In the event that licenses from third parties are required by LICENSEE in order to make, have made, use, sell, offer to sell or import any particular Licensed Product or Licensed Process, then the earned royalty which LICENSEE is obligated to pay LICENSOR under this Agreement shall be reduced by XXXX ($XXXX) for each one dollar ($1.00) in royalties which Licensee is obligated to pay to third parties under such licenses, further provided, however, that the royalties payable to LICENSOR under this Section shall not be reduced to less than XXXX percent (XXXX%) of the applicable Net Sales.

8.2 All payments shall be made hereunder in U.S. Dollars: provided however. that if the proceeds of the sales upon which such royalty payments are based are received by the LICENSEE in a foreign currency or other form that is not convertible or exportable in dollars. and the LICENSEE does not have ongoing business operations or bank accounts in the country in which the currency is not convertible or exportable. the LICENSEE shall pay such royalties in the currency of the country in which such sales were made by depositing such royalties in LICENSOR'S name in a bank designated by LICENSOR in such country. Royalties in dollars shall be computed by converting the royalty in the currency of the country in which the sales were made at the exchange rate for dollars prevailing at the close of the business day of the LICENSEE'S quarter for which royalties are being calculated as published. the following day in the Wall Street Journal (or. if it ceases to be published. a comparable publication to be agreed upon from time to time by the parties). and with respect to those countries for which rates are not published in the Wall Street Journal the exchange rate fixed for such date by the appropriate United States governmental agency.

8.3 In the event the royalties set forth herein are higher than the maximum royalties permitted by the law of regulations of a particular country. the royalty payable for sales in such country shall be equal to the maximum permitted royalty under such law or regulation.

8.4 In the event that any taxes. withholding or otherwise. are levied by any taxing authority in connection with accrual or payment of any royalties payable to LICENSOR under this Agreement. the LICENSEE shall have the right to pay such taxes to the local tax authorities on behalf of LICENSOR and the payment to LICENSOR of the net amount due after reduction by the amount of such taxes. shall fully satisfy the LICENSEE'S royalty obligations under this Agreement.

8.5 As partial consideration for the license granted pursuant to this Agreement LICENSEE shall issue to LICENSOR a fully paid. nonassessable number of common shares equal to XXXX percent (%) of the total number of LICENSEE common shares issued and outstanding. LICENSEE shall affect the issuance of such shares by

concurrent execution of an appropriate Stockholders Agreement and Investor Rights Agreements, the terms of which are incorporated by reference herein.

9. DILIGENCE:

9.1 LICENSEE shall use efforts at least sufficient to meet the requirements of the Bayh-Dole Act to manufacture, market and sell the Licensed Products in the Territory, and to create a demand for the Products.

9.2 LICENSEE agrees to submit reports, upon LICENSOR's request but no more than every six months as to its efforts to develop markets for the licensed Products. Such reports shall include assurance by LICENSEE of its intent to actively develop commercial embodiments of Licensed Products and a summary of its efforts in this regard.

9.3 Unless LICENSEE has introduced a Licensed Product into the commercial marketplace in one of the three major markets (European Union. Japan and the United States) or has made best efforts (for avoidance of doubt it will be presumed that LICENSEE has used best efforts if it has a Licensed Product in a phase III clinical trial) to achieve the same prior to December 31, 2020 LICENSEE agrees that LICENSOR may terminate this Agreement by providing LICENSEE ninety (90) advanced written notice of its intent to terminate this Agreement. In the event the payment of earned royalties, once begun and if any are due, ceases for more than two (2) calendar quarters, and LICENSEE fails to cure this breach within two (2) months after being provided written notice of same. LICENSOR may terminate this Agreement.

10. REPORTS AND RECORDS

10.1 Commencing one (1) year after the first sale, the LICENSEE shall furnish to LICENSOR a report in writing specifying during the preceding calendar quarter (a) the number or amount of Licensed Products sold hereunder by LICENSEE, and/or its Affiliates or Sublicensees, (b) the total billings for all Licensed Products sold, (c) deductions as applicable in paragraph 1.6. (d) total royalties due, (e) names and addresses of all Sublicensees. Such reports shall be due within forty-five (45) days following the last day of each calendar quarter in each year during the term of this Agreement. Each

Such report shall be accompanied by payment in full of the amount due LICENSOR in United States dollars calculated in accordance with Section 8.1 hereof.

10.2 For a period of three (3) years from the date of each report pursuant to Paragraph 10.1. LICENSEE shall keep records adequate to verify each such report and accompanying payment made to LICENSOR under this Agreement, and an independent certified public accountant or accounting firm selected by LICENSOR and acceptable to LICENSEE may have access, on reasonable notice during regular business hours, not to exceed once per year, to such records to verify such reports and payments. Such accountant or accounting firm shall not disclose to LICENSOR any information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the certified public accountant or accounting firm performing such verification shall be borne by LICENSOR unless in the event that the audit reveals an underpayment of royalty by more than ten (10%) percent. the cost of the audit shall be paid by LICENSEE.

10.3 LICENSOR shall promptly inform LICENSEE of all Improvements (including results of all clinical trials) made during the term of the Agreement. LICENSEE shall keep each Improvement confidential for a period of ninety (90) days following its disclosure to LICENSEE in order to provide sufficient time to file a patent application on said Improvement.

11. MARKING AND STANDARDS:

11.1 Prior to the issuance of patents on the Invention(s), LICENSEE agrees to mark and have sublicensees mark Licensed Products (or their containers or labels) made, sold, or otherwise disposed of by it under the license granted in this Agreement with a proper patent notice as specified under the patent laws of the United States.

11.2 LICENSEE further agrees to maintain satisfactory standards in respect to the nature of the Licensed Products manufactured and/or sold by LICENSEE. LICENSEE agrees that all Licensed Products manufactured and/or sold by it shall be of a quality which is appropriate to products of the type here involved. LICENSEE agrees that similar provisions shall be included in sublicenses of all tiers.

12. ASSIGNMENT:

12.1 This Agreement is not assignable by LICENSEE or by operation of law without prior written consent of LICENSOR at its sole discretion except that LICENSEE shall have the right to transfer or assign this Agreement to any entity which acquires all or substantially all of LICENSEE's assets provided that LICENSEE fives LICENSOR thirty (30) days advance written notice of the intended assignment and considers in good faith any of LICENSOR's concerns relating to the intended assignment. The foregoing sentence shall not be construed to require LICENSEE to obtain LICENSOR's approval of any Sublicensee.

12.2 This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of LICENSOR and LICENSEE.

13. NOTICE:

Any notice, payment, report or other correspondence (hereinafter collectively referred to as "correspondence") required or permitted to be given hereunder shall be mailed by certified mail or delivered by hand to the party to whom such correspondence is required or permitted to be given hereunder. If mailed, any such notice shall be deemed to have been given when mailed as evidenced by the postmark at point of mailing. If delivered by hand, any such correspondence shall be deemed to have been given when received by the party to whom such correspondence is given, as evidenced by written and dated receipt of the receiving party.

All correspondence to LICENSEE shall be addressed as follows:

Mr. Jeffrey Wolf
CEO
Heat Biologics, Inc.
Atlantic Center
119 Washington Avenue. Suite 401
Miami Beach. FL 33139

All correspondence to LICENSOR shall be addressed, in duplicate, as follows:

FOR NOTICE:

Vice President
Business Affairs
327 Max Orovitz Building
1507 Levante Avenue
Coral Gables. Florida 33124-1432
Attention: Mr. Alan J. Fish

FOR NOTICE AND PAYMENT:

UM Innovation
Office of Special Programs and Resource Strategy
1150 NW 14th Street. Suite 310
Miami. FL 33136

Either party may change the address to which correspondence to it is to be addressed by notification as provided herein.

14. TERMINATION:

14.1 A party shall have the right to terminate this Agreement if the other party commits (a) a material breach of an obligation under this Agreement or (b) provides a false report, and continues in breach for more than ninety (90) days after receiving unambiguous written notice of such breach or false report: however, in the event LICENSEE breaches its obligations under Section five (5) or eight (8) above. LICENSEE shall have thirty (30) days after receiving written notice to cure such breach, after which LICENSOR shall have the right to terminate this Agreement. Such termination shall be

effective upon further written notice to the breaching party after failure by the breaching party to cure such default.

14.2 The license and rights granted in this Agreement have been granted on the basis of the special capability of LICENSEE to perform research and development work leading to the manufacture and marketing of the Products. Accordingly, LICENSEE covenants and agrees that in the event any proceedings under the Bankruptcy Act or any amendment thereto, be commenced by or against LICENSEE, and, if against LICENSEE, said proceedings shall not be dismissed with prejudice before either adjudication in bankruptcy of the confirmation of a composition, arrangement, or plan of reorganization, or in the event LICENSEE shall be adjudged insolvent or make an assignment for the benefit of its creditors, or if a writ of attachment or execution be levied upon the license hereby created and not be released or satisfied within ten (10) days thereafter. or if a receiver be appointed in any proceeding or action to which LICENSEE is a party with authority to exercise an of the rights or privileges granted hereunder and such receiver be so discharged within a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by LICENSEE and, LICENSOR, at the election of LICENSOR, but not otherwise, ipso facto, and without notice or other action by LICENSOR, shall terminate this Agreement and all rights of LICENSEE hereunder and all rights of any and all persons claiming under LICENSEE.

14.3 LICENSEE shall have the right to terminate this Agreement by providing ninety (90) days written notice of its intent to terminate this Agreement to LICENSOR.

14.4 Any termination of this Agreement shall be without prejudice to LICENSOR's right to recover all amounts accruing to LICENSOR prior to such termination and cancellation. Except as otherwise provided, should this Agreement be terminated for any reason, LICENSEE shall have no rights, express of implied, under any patent property which is the subject matter of this Agreement, nor have the right to recover any royalties paid LICENSOR hereunder. Upon termination, LICENSEE shall have the right to dispose of Licensed Products then in their possession and to complete existing contracts for such products, so long as contracts are completed within six (6)

months from the date of termination, subject to the payment of royalties to LICENSOR as provided in Section 8 hereof.

15. CERTIFICATE OF INSURANCE:

15.1 LICENSEE shall maintain liability insurance coverage for the Product in the amount of XXXX dollars ($XXXX) and at no expense to LICENSOR. LICENSEE shall name LICENSOR as an additional insured. Within fourteen (14) days of execution of this Agreement, LICENSEE shall provide a certificate of insurance to LICENSOR. LICENSEE agrees to carry and keep in force, at its expense, general liability insurance with limits not less than $XXXX per person and $XXXX aggregate to cover liability for damages to property of any person. Such insurances shall contain an endorsement naming the University of Miami as an additional insured with respect to this Agreement. Insurance Certificates should be sent to the University of Miami upon execution of this Agreement and on the anniversary of that date every year thereafter. Office of Technology Transfer, 1475 NW 12th Avenue, Sewell Building Room 2012, Miami. FL 33136.

15.2 Licensee shall not cancel such insurance without thirty (30) days prior notice to Licensor. Such cancellation shall be cause for termination.

15.3 The terms of this provision shall extend beyond termination of the agreement.

16. USE OF NAME:

LICENSEE shall not use the name of the University of Miami, or any of its employees, or any adaptation thereof, in any publication, including advertising, promotional or sales literature without the prior written consent of Mr. Alan J. Fish, Vice President of Business Services, 327 Max Orovitz Bldg., 1507 Levante Avenue, Coral Gables FL 33124-1432. LICENSOR shall notify LICENSEE within ten (20) days of being provided notice of its decision regarding each instance of intended use of name(s) names(s). The absence of a response by LICENSOR within this ten (10) day period shall

constitute implied permission of LICENSEE to use such name in that instance. Any press releases concerning this Agreement must be mutually agreed upon by the parties.

17. GOVERNING LAW:

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Florida.

18. CAPTIONS:

The captions and paragraph heading of this Agreement are solely for the convenience of reference and shall not affect its interpretation.

19. SEVERABILITIY:

Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in valid and enforceable manner, and the remainder of the Agreement shall remain binding upon the parties hereto.

20. SURVIVAL:

20.1 The provisions of Sections 5. 6 and 7 shall survive the termination or expiration of this Agreement and shall remain in full force and effect.

20.2 The provisions of this Agreement which do not survive termination or expiration hereof (as the case may be) shall, nonetheless, be controlling on, and shall be used in construing and interpreting, the rights and obligations of the parties hereto with regard to any dispute, controversy or claim which may arise under, out of, in connection with, or relating to this Agreement.

21. AMENDMENT:

No amendment or modification of the terms of this Agreement shall be binding on either party unless reduced to writing and signed by an authorized officer of the party to be bound.

22. WAIVER:

No failure or delay on the part of a party in exercising any rights hereunder will operate as a waiver of, or impair, any such right. No single or partial exercise of any such right will preclude any other or further exercise thereof or the exercise of any other right. No waiver of any such right will be deemed a waiver of any other right hereunder.

23. CONFIDENTIALITY:

Each Party shall maintain all information of the other Party which is treated by such other Party as proprietary or confidential (referred to herein as "Confidential Information") in confidence, and shall not disclose. divulge or otherwise communicate such confidential information to others, or use it for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this Agreement, and each party hereby agrees to exercise every reasonable precaution to prevent and restrain the unauthorized disclosure of such confidential information by any of its Affiliates, directors, officers, employees, consultants, subcontractors, sublicensees or agents. LICENSEE's Confidential Information includes but is not limited to the development plan, development reports and all other financial and business reports, strategies, and agreements (including sublicenses) of LICENSEE. The parties agree to keep the terms of this Agreement confidential, provided that each party may disclose this Agreement to their authorized agents and investors who are bound by similar confidentiality provisions. Notwithstanding the foregoing, Confidential Information of a party shall not include information which: (a) was lawfully known by the receiving party prior to disclosure of such information by the disclosing party to the receiving party: (b) was or becomes generally available in the public domain, without the fault of the receiving party: (c) is subsequently disclosed to the receiving party by a third party having a lawful right to make such disclosure: (d) is required by law, rule, regulation or legal process to be disclosed, provided that the receiving party making such disclosure shall take all reasonable steps to restrict and maintain to the extent possible confidentiality of such disclosure and shall provide reasonable notice to the other party to allow such party the opportunity to oppose the required disclosure: or (e) has been independently developed by employees

or others on behalf of the receiving party without access to or use of disclosing party's information as demonstrated by written record. Each party's obligations under this Section shall extend for a period of five (5) years from termination or expiration of this Agreement.

24. UNIVERSITY RULES AND REGULATIONS:

LICENSEE understands and agrees that University of Miami personnel who are engaged by LICENSEE, whether as consultants, employees or otherwise, or who possess a material financial interest in LICENSEE, are subject to the University of Miami's rule regarding outside activities and financial interests, and the University of Miami's Intellectual Property Policy. Any term or condition of an agreement between LICENSEE and such University of Miami personnel which seeks to vary or override such personnel's obligations to the University of Miami may not be enforced against such personnel, or the University of Miami, without the express written consent of an individual authorized to vary or waive such obligations on behalf of the University of Miami.

25. ENTIRE AGREEMENT:

This Agreement constitutes the entire agreement between the parties hereto respecting the subject matter hereof, and supercedes and terminates all prior agreements respecting the subject matter hereof, whether written or oral, and may be amended only by an instrument in writing executed by both parties hereto.

26. CONTRACT FORMATION AND AUTHORITY:

LICENSOR and LICENSEE each warrant and represent that the persons signing this Agreement on its behalf have authority to execute this Agreement and that the execution of this Agreement does not violate any law. rule or regulation applicable to it or any contract or other agreement by which it is bound.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

[SIGNATURE PAGE FOLLOWS]

HEAT BIOLOGICS, INC.

Date: July 11, 2008

By: /s/ Jeffrey Wolf

Jeffrey Wolf
Name

President
Title

UNIVERSITY OF MIAMI

Date: July 11, 2008

By: /s/ Bart Chernow

Bart Chernow
Name

Vice President/U of Miami
Title

WPB:404886:1

APPENDIX A – "Podack Cancer Vaccine (UM9XX7-14)"

A cell-based vaccine for treating cancer patients utilizes human cancer cells that have been engineered to secrete gp96. The presently preferred version of the vaccine uses the AD100 human lung adrenocarcinoma cell line transfected with constructs that encode III.A-AI and gp96-Ig (heat shock protein gp96 fused to Fe region of IgGI). In a presently preferred protocol, NSCLC patients are intradermermally administered several injections of $5x10^7$ vaccine cells each at two week intervals.

LICENSE AGREEMENT

This License Agreement (the "Agreement") is entered into and made effective the18 day of Feb, 2011 (the "Effective Date") between UNIVERSITY OF MIAMI and its School of Medicine, whose principal place of business is at 1600 N.W. 10th Avenue, Miami, Florida 33136 (hereinafter referred to as "LICENSOR") AND heat biologics I, Inc., A Delaware corporation whose principal place of business if at Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 33139 (hereinafter referred to as :LICENSEE").

WITNESSETH

WHEREAS, HEAT BIOLOGICS, Inc., a Delaware Corporation whose principal place of business of Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 331339 ("HEAT") is the majority shareholder of the LICENSEE. With effect of July 11, 2008, HEAT and the LICENSOR have entered into a license agreement regarding the Podack Cancer Vaccine (UM97-14)) which was later assigned to the LICENSEE (HEREINAFTER also referred to herein as the "Podack Cancer Vaccine License Agreement").

WHEREAS LICENSOR is the sole owner of the technology and product identified as the HIV/SIV Vaccine Technology (UM143);

WHEREAS LICENSOR is the sole owner of the patent rights relating to the HIV/SIV Vaccine Technology (UM243);

WHEREAS LICENSOR wishes to exclusively license to LICENSEE the HIV/SIV Vaccine Technology (UM143) and patent rights related thereto; and

WHEREAS LICENSEE desires to acquire an exclusive license from LICENSOR to the HIV/SIV Vaccine Technology (UM143) and patent rights related therefor for the purpose of commercially marketing the HIV/SIV Vaccine Technology (UM143)

THEREFORE, For these and other valuable considerations, the receipt of which is hereby acknowledged, the parties agree as follows:

1. DEFINITIONS:

1.1 "Affiliate" shall mean any corporation of other business entity controlled by, controlling or under common control with LICENSEE. For this purpose, "control" shall mean direct or indirect beneficial ownership of a least a fifty percent (50%) of the voting stock, or at least a fifty percent (50%) interest in the income of such corporation or other business entity, or such other relationship as in fact, constitutes actual control

1.2 "Sublicensee" as used in this Agreement shall mean any third party to whom LICENSEE has granted a license to make, have made, use and/or sell the Product under the Patent Rights, provided said third party has agreed in writing with LICENSEE to accept the conditions and restrictions agreed to by LICENSEE in the Agreement.

1.3 "Patent Rights" shall mean the following United States Patent applications: U.S. patent application serial number US 61/116.971 entitled "HIV/SIV Vaccine for the Generation of Mucosal and Systemic Immunity" and filed on 21 November, 2008. PC Patent application number PCT/US2009.065500 ENTITLED "HIV/SIV Vaccine for the Generation of Mucosal and Systemic Immunity" and filed on 23 November 2009; all United States patents and foreign patents and patent applications based on these U.S. applications, all divisionals, continuations of the foregoing, and those claims in continuations-in part of the foregoing that are described in sufficient detail in U.S. patent application serial number US61/116.971 and PCT patent application number PCT US2009/065500 to meet the requirements of 35 USC112¶1; and any re-examination or reissues of the foregoing.

1.4 "Licensed Product shall mean any product or part thereof which:

(a) is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim, or a pending claim contained in the Patent Rights;

(b) is manufactured by using a process which is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights; or

(c) incorporates or comprises the Licensed Materials.

1.5 “Licensed Process” shall mean any process practiced in a country in which said process is covered in whole or in part by and issued, unexpired, and not adjudicated unenforceable claim or pending claim contained in the Patent Rights.

1.6 “Net Sales” shall mean the sum of all amounts invoiced on account of sale of the Licensed Products and Licensed Processes by LICENSEE and its Affiliates or any Sublicensees to non-affiliated third party purchasers or users of Licensed Products or Licensed Processes, less (a) discounts to purchasers in amounts customary in the trade, (b) amounts for transportation or shipping charges to purchasers, (c) credits for returns, allowances of trades, and (d) taxes and duties levied on the sale or use of Licensed Products whether absorbed by Licensee or paid by the purchaser.

1.7 “Territory” shall mean worldwide.

1.8 “Field of Use” shall mean all human healthcare and research applications.

.9 “”Licensed Materials” shall mean LICENSOR’s biological materials in the possession of Dr. Eckhard Podack’s laboratory at the Effective Date that are covered in whole or in part by an issued, unexpired and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights.

2. GRANT:

2.1 LICENSOR hereby grants to LICENSEE an exclusive license subject to any rights of the U.S. government specified in section 4 below, in the Territory for the Field of Use, with the right to sublicense, under the Patent Rights, to make, have made for its own use and sale, use and sell Licensed Products and Licensed Processes.

2.2 LICENSOR also hereby grants to LICENSEE an exclusive license to make, use, and/or sell the Licensed Materials in the Territory for the Field of Use. At LICENSEE;s request, LICENSOR shall provide LICENSEE with a reasonable amount of Licensed Materials so that LICENSEE may reproduce such Licensed Materials for the purpose of making, selling, or using Licensed Products of Licensed Processes.

2.3 LICENSOR reserves to itself the non-transferable right to make and use Licensed Materials, Licensed Products and/or Licensed Processes solely for its

internal, non-commercial: scientific research, not-for-profit clinical research, and educational purposes. Except to the extent required by law, LICENSOR shall not transfer the Licensed Materials for the purpose of making the Licensed Materials to any third party without first obtaining, in a Material Transfer Agreement, the written agreement of that third party to not use or further distribute such materials for commercial purposes. LICENSOR shall notify LICENSEE in writing of any third party request for such materials and provide LICENSEE at least ten (10) days to object to such request on the basis that such transfer would interfere with the objectives of this Agreement.

3. TERM:

The License granted by this Agreement shall be exclusive in the Licensed Field of Use for a term commencing as of the Effective Date of this Agreement and continue until the expiration, on a country by country basis of all of the Patent Rights.

4. UNITED STATES LAW:

4.1 Licensee understands that the Licensed Subject Matter may have been developed under a funding agreement with the Government of the United States of America and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any agreement and any applicable Law or regulation. If there is a conflict between an agreement, applicable Law or regulation and this Agreement, the terms of the government agreement, applicable Law or regulation shall prevail.

Specifically, This Agreement is subject to all of the terms and conditions of Title 35 United States Code sections 200 through 204, including an obligation that Licensed Product(s) sold or produced in the United States be "manufactured substantially in the United States" and LICENSEE agrees to take all reasonable action necessary on its part a licensee to enable LICENSOR to satisfy its obligation thereunder relating to Inventions(s).

4.2 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended

and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE, that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. LICENSOR neither represents that a license shall not be required nor that, if required, it shall be issued.

5. PATENT PROTECTION AND INFRINGEMENT:

5.1 LICENSOR, during the term of this Agreement, is responsible for the filing and the prosecution of all patents and applications where LICENSEE shall reimburse LICENSOR for all payment within thirty (30) days of invoice. LICENSOR shall keep LICENSEE fully apprised on the status of all Patent Rights and shall provide LICENSEE the opportunity to make comments and suggestions on all decisions relating to the prosecution of the Patent Rights (e.g. office actions). LICENSOR shall in good faith consider incorporating such comments and suggestions unless such incorporation would be contrary to the purposes of this Agreement.

5.2 LICENSEE shall promptly notify LICENSOR in writing of any claim of Patent Rights infringement which may be asserted against LICENSEE or LICENSOR, its Affiliates and any sublicensees because of the manufacture, use, promotion and sale of Products.

5.3 LICENSEE shall pay to LICENSOR a license issue fee in the amount of $50,000 and past patent fees in an amount of $14,158 within thirty (30) days of the Effective Date, which sum, among other things, shall be considered full consideration for the filing, prosecution, issuance, and maintenance of the Patent Rights incurred prior to the Effective Date. LICENSEE shall also pay to LICENSOR all future patent fees within thirty (30) days after the LICENSEE has received the invoice from LICENSOR pertaining to each future patent fee.

5.4 LICENSEE will defend, indemnify and hold harmless LICENSOR, its trustees, officers, directors, employees and its Affiliates against and any all judgments and damages arising from any and all third party claims of Patent Rights infringement

which may be asserted against LICENSOR, and Affiliates because of the manufacture, use, promotion and sale of Licensed Products except for the use of Licensed Materials, Licensed Products and/or Licensed Processes by Licensor pursuant to section 2.3 of this Agreement. LICENSEE will bear all costs and expenses incurred in connection with the defense of any such claims or as a result of any settlement made or judgment rendered on the basis of such claims. LICENSOR shall have no further liability to LICENSEE for any loss of damages LICENSEE may incur as a result of the invalidity of LICENSOR'S Patent Rights. LICENSOR will have the right, but not the obligation to retain counsel at its expense in connection with any such claim. LICENSOR at its option, shall have the right, within thirty days after commencement of such action , to intervene and take over the sole defense of the action at its own expense.

5.5 Upon learning of any infringement of Patent Rights by third parties in any country, LICENSEE and LICENSOR will promptly inform each other, as the case may be, in writing of that fact and will supply the other with any available evidence pertaining to the infringement. LICENSEE at its own expense, shall have the option to take whatever steps are necessary to stop the infringement at its expense and recover damages therefore, If requested by LICENSEE, LICENSOR will join in any legal actions enforcing or defending the Patent Rights against third parties deemed necessary or advisable by LICENSEE to prevent or seek damages, or both, from the infringement of the Patent Rights provided that LICENSEE funds all costs associated with such actions, using counsel mutually acceptable to LICENSEE and LICENSOR, and indemnifies and holds LICENSOR harmless with respect to any claims or damages made against or sustained by LICENSOR in connection with such involvement. In the event that LICENSOR and LICENSEE mutually bring suit, costs and expenses shall be borne by LICENSEE, and any recovery shall be shared by the parties as if such infringing sales were Net Sales. In any event, no settlement, consent judgment or other voluntary final disposition of the sum may be entered into without the consent of LICENSOR, which shall not be unreasonably withheld. In the event LICENSEE does not take steps to stop the infringement, LICENSOR shall have the right to bring suit at its own expense. In such event, financial recoveries will be entirely retained by LICENSOR.

5.6 LICENSOR shall have no responsibility with respect to LICENSEE'S own trademarks and tradename, and LICENSEE in respect to the use thereof will defend, indemnify and hold harmless LICENSOR against any and all third party claims.

6. INDEMNIFICATION:

6.1 LICENSEE agrees to release, indemnify and hold harmless the LICENSOR, its trustee, officers, faculty, employees and students against any and all losses, expenses, claims actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSOR, its trustees, officers, faculty, employees and students as a result of or arising out of any negligent act or omission of LICENSEE, its agents, or employees, or arising out of use, production, manufacture, sale, lease, consumption or advertisement by LICENSEE or any Sublicensee of any Licensed Product, Licensed Process, or Licensed Materials covered by this Agreement.

6.2 LICENSOR agrees to release, indemnify and hold harmless the LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and agents against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and/or agents as a result of or arising out of any willful misconduct or negligent act of omission of LICENSOR.

6.3 This Agreement to reimburse and indemnify under the circumstances set forth above shall continue after the termination of this Agreement.

7. REPRESENTATIONS/WARRANTIES:

7.1 LICENSOR hereby represents and warrants to LICENSEE that LICENSOR owns the Patent Rights and Licensed Materials and has not assigned any rights therein or given any license or other right to any party other than LICENSEE.

7.2 LICENSOR hereby represents and warrants that, although it has not conducted any investigation, it has no knowledge of any patents or patent applications, other than the Patents Rights, that contain a claim that would be infringed by the sale or use of a Licensed Product, Licensed Process, or Licensed Materials.

7.3 EXCEPT AS PROVIDED ABOVE, LICENSOR MAKES NO WARRANTIES, EXPRES OR IMPLIED, AND HEREBY DISCLAIMS ALL SUCH WARRANTIES AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE CONDITION OF ANY INVENTION(S) OR PRODUCT, WHETHER TANGIBLE OR INTANGIBLE, LICENSED UNDER THIS AGREEMENT, OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE INVENTION OR PRODUCT, OR THAT THE USE OF THE LICENSED PRODUCT WILL NOT INFRINGE ANY PATENT, COPYRIGHTS, TRADEMARKS, OR OTHER RIGHTS. OTHER THAN FOR BREACH OF THE ABOVE WARRANTIES, OR ITS OWN NEGLIGENT ACTS OR OMISSIONS, LICENSOR SHALL NOT BE LIABLE FOR ANY DIRECT CONSEQUENTIAL, OR OTHER DAMAGES SUFFERED BY ANY LICENSEE OF ANY THIRD PARTIES RESULTING FROM THE USE, PRODUCTION, MANUFACTURE, SALE, LEASE, CONSUMPTION, OR ADVERTISEMENT OF THE PRODUCT.

7.,4 EXCEPT FOR EXPLICITLY PROVIDED FOR HEREIN, LICENSEE DOES NOT MAKE ANY OTHER REPRESENTATIONS OF GIVE ANY OTHER EXPLICIT OR IMPLICIT WARRANTIES. TO THE FULLEST EXTENT PERMITTED BY LAW LICENSEE HEREBY DISCLAIMS ANY OTHER REPRESENTATIONS AND WARRANTIES.

7.5 This provisions of this Section shall continue beyond the termination of this Agreement.

8. ROYALTIES:

8.1 In consideration of the license herein granted, LICENSEE shall pay royalties to LICENSOR as follows:

(a) LICENSEE agrees to pay to LICENSOR a license issue fee of $50,000 and past patent fees in an amount of $14,158 as of 1 within thirty (30) days of the Effective Date as well as any future patent fees as set out in section

(b) LICENSEE agrees to pay to LICENSOR as earned royalties a royalty calculated as a percentage of LICENSEE;s Net Sales of Licensed Products which, if not for this Agreement, would infringe the Patent Rights, in accordance with the terms and conditions of the Agreement. The royalty is deemed earned as of the earliest of the date the Licensed Product and/or Licensed Process is actually sold and paid for, the date and invoice is sent by LICENSEE, or the date a Licensed Product and/or Licensed Process if transferred to a third party for any promotional reasons. The royalty shall remain fixed while this Agreement is in effect at a rate of XXXX percent (XXXX%) of Net Sales.

(c) For a sublicense, LICENSEE shall pay to LICENSOR an amount equal to XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee. In addition, if LICENSEE receives any fees, minimum royalties, or other payments in consideration for any rights granted under a Sublicense, and such payments are not based directly upon the amount or value of Licensed Products or Licensed Processes sold by the Sublicensee nor represent payment of costs to LICENSEE for a development program which LICENSEE is obligated to perform under such sublicense.. then LICENSEE shall pay LICENSOR XXXX percent (XXXX%) of such payments.

(d) In the event that licenses from third parties are required by LICENSEE in order to make, have made, use, sell, offer to sell or import any particular Licensed Product or Licensed Process, then the earned royalty which LICENSEE is obligated to pay LICENSOR under this Agreement shall be reduced by XXXX ($XXXX) for each one dollar ($1.00) in royalties which Licensee is obligated to pay to third parties under such licenses, further provided, however, that the royalties payable to LICENSOR under this Section shall not be reduced to less than XXXX percent (XXXX%) of the applicable Net Sales.

(e) In the event that LICENSEE requires more than one license from the LICENSOR to make, have made for its use, sell, offer to sell or import any particular Licensed Product or Licensed Process as defined in sections 1.4 and 1.5, respectively, of this Agreement, then the combined earned royalties shall not exceed XXXX% of Net Sales and any sublicense fees shall not exceed XXXX-percent (XXXX%) of what LICENSEE would have been required to pay LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee.

8.2 All payments shall be made hereunder in U.S. dollars; provided however, that if the proceeds of the sales upon which such royalty payments are based are received by the LICENSEE in a foreign currency or other form that is not convertible or exportable in dollars, and the LICENSEE does not have ongoing business operations or bank accounts in the country in which the currency is not convertible or exportable, the LICENSEE shall pay such royalties in the currency of the country in which such sales were made by depositing such royalties in LICENSOR'S name in a bank designated by LICENSOR IN SUCH COUNTRY. Royalties in U.S. dollars shall be computed by converting the royalty in the currency of the country in which the sales were made at the exchange rate for U.S. dollars prevailing at the close of the business day of the LICENSEE'S quarter for which royalties are being calculated as published the following day in the Wall Street Journal (or, if it ceases to be published, a comparable publication

be agreed upon from time to time by the parties), and with respect to those countries for which rates are not published in the Wall Street Journal, the exchange rate fixed for such date by the appropriate United States governmental agency.

8.3 In the event the royalties set forth herein are higher than the maximum royalties permitted by the law or regulations of a particular country, the royalty payable for sales in such country shall be equal to the maximum permitted royalty under such law or regulation.

8.4 In the event that any taxes, withholding or otherwise, are levied by any taxing authority in connection with accrual or payment of any royalties payable to LICENSOR under this Agreement, the LICENSEE shall have the right to pay such taxes to the local tax authorities on behalf of LICENSOR and the payment to LICENSOR of the net amount due after reduction by the amount of such taxes shall fully satisfy the LICENSEE'S royalty obligations under this Agreement.

9. DILIGENCE:

9.1 LICENSEE shall use efforts at least sufficient to meet the requirements of the Bayh-Dole Act to manufacture, market and sell the Licensed Products in the Territory, and to create a demand for the Products.

9.2 LICENSEE agrees to submit reports upon LICENSOR's request but no more than every 6 months as to its efforts to develop markets for the Licensed Products. Such reports shall include assurance by LICENSEE of its intent to actively develop commercial embodiments of Licensed Products and a summary of its efforts in this regard.

9.3 Unless LICENSEE has introduced a Licensed Product into the commercial marketplace in one of the three major markets (European Union, Japan and the United States) or has made best efforts (for avoidance of doubt it will be presumed that LICENSEE has used best efforts if it has a Licensed Product in a phase III clinical trial) to achieve the same prior to December 31, 2020. LICENSEE agrees that LICENSOR may terminate this Agreement by providing LICENSEE ninety (90) advanced written notice of its intent to terminate this Agreement. In the event the payment of earned royalties, once begun and if any are due, ceases for more than two (2) calendar quarters,

And LICENSEE fails to cure this breach within two (2) months after being provided written notice of same, LICENSOR may terminate this Agreement.

10. REPORTS AND RECORDS:

10.1 Commencing one (1) year after the first sale, the LICENSEE shall furnish to LICENSOR report in writing specifying during the preceding calendar quarter (a) the number or amount of Licensed Products sold hereunder by LICENSEE and/or its Affiliates or Sublicensees, (b) the total billings for all Licensed Products sold, (c) deductions as applicable in paragraph 1.6, (d) total royalties due, (e) names and addresses of all Sublicensees. Such reports shall be due within forty-five (45) days following the last day of each calendar quarter in each year during the term of this Agreement. Each such report shall be accompanies by payment in full of the amount due LICENSOR in United States dollars calculated in accordance with Section 8.1 hereof.

10.2 For a period of three (3) years from the date of each report pursuant to paragraph 10.1, LICENSEE shall keep records adequate to verify each such report and accompanying payment made to LICENSOR under this Agreement, and an independent certified public accountant or accounting firm selected by LICENSOR and acceptable to LICESEE may have access, on reasonable notice during regular business hours, not to exceed once per year, to such records to verify such reports and payments. Such accountant or accounting firm shall not disclose to LICENSOR any information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the certified public accountant or accounting firm performing such verification shall be borne by LICENSOR unless in the event that the audit reveals an underpayment of royalty by more than ten (10%) percent, the cost of the audit shall be paid by LICENSEE.

10.3 LICENSOR shall promptly inform LICENSEE of all Improvements (including results of all clinical trials) made during the term of the Agreement. LICENSEE shall keep each Improvement confidential for a period of ninety (90) days following its disclosure to LICENSEE in order to provide sufficient time to file a patent application on said Improvement.

11. MARKING AND STANDARDS:

11.1 LICENSEE agrees to mark and have sublicensees mark Licensed Products for their containers of labels) made, sold or otherwise disposed of by it under the license granted in this Agreement with a proper patent notice as specified under the patent laws of the United States.

11.2 LICENSEE further agrees to maintain satisfactory standards in respect to the nature of the Licensed Products manufactured and/or sold by LICENSE. Licensee agrees that all Licensed Products manufactured and/or sold by it shall be of a quality which is appropriate to products of the type here involved. LICENSEE agrees that similar provisions shall be included in sublicenses of all tiers.

12. ASSIGNMENT:

12.1 This Agreement is not assignable by LICENESEE or by operation of law without the prior written consent of LICENSOR at its sole discretion except that LICENSEE shall have the right to transfer or assign this Agreement to any entity which acquires all or substantially off of LICENSEE's assets provided that LICENSEE gives LICENSOR thirty (30) days advance written notice of the intended assignment and considers in good faith any of LICENSOR's concerns relating to the intended assignment. The foregoing sentence shall not be construed to require LICENSEE to obtain LICENSOR's approval of any Sublicensee.

12.11.2012 This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of LICENSOR and LICENSEE.

13. NOTICE:

Any notice, payment, report or other correspondence (hereinafter collectively referred to as "correspondence") required or permitted to be given hereunder shall be mailed certified mail or delivered by hand to the party to whom such correspondence is required or permitted to be given hereunder. If mailed, any such notice shall be deemed to have been given when mailed as evidenced by the postmark at point of mailing. If delivered by hand, any such correspondence shall be deemed to have been

given when received by the party to whom such correspondence is given, as evidenced by written and dated receipt of the receiving party.

All correspondence to LICENSEE shall be addressed as follows:

Mr. Jeffrey Wolf
CEO
Heat Biologics, Inc.
Atlantic Center
119 Washington Avenue, Suite 401
Miami Beach, FL 33139

All correspondence to LICENSOR shall be addressed, in duplicate, as follows:

FOR NOTICE:

Assistant Vice President
Treasurer
327 Max Orovitz Building
1507 Levante Avenue
Coral Gables, Florida 33124-1432
Attention: Mr. Humberto Speziani

FOR NOTICE ANDPAYMENT:

Office of Technology Transfer
1475 NW 12th Avenue
Sewell Building Room 2012
Miami, FL 33136

Either party may change the address to which correspondence to it is to be addressed by notification as provided herein.

14. TERMINATION:

14.1 A party shall have the right to terminate this Agreement if the other party commits (a) a material breach of an obligation under this Agreement or (b) provides a false report, and continues in breach for more than ninety (90) days after receiving unambiguous written notice of such reach or false report, however, in the event LICENSEE breaches its obligations under Section five (5) or eight (8) above, LICENSEE shall have thirty (30) days after receiving written notice to cure such breach, after which LICENSOR shall have the right to terminate this Agreement. Such termination shall be effective upon further written notice to the breaching party after failure by the breaching party to cure such default.

14.2 The license and rights granted in this Agreement have been granted on the basis of the special capability of LICENSEE to perform research and development work leading to the manufacture and marketing of the Products. Accordingly, LICENSEE covenants and agrees that in the event any proceeding under the Bankruptcy Act or any amendment thereto, be commenced by or against LICENSEE, and , if against LICENSEE, said proceedings shall not be dismissed with prejudice before either an adjudication in bankruptcy or the continuation of a composition, arrangement, or plan of reorganization, or in the event LICENSEE shall be adjudged insolvent or make an assignment for the benefit of its creditors, or if a writ of attachment or execution be levied upon the license hereby created and not be released or satisfied within ten (10) days therafter, or if a receiver be appointed in any proceeding or action to which LICENSEE is a party with authority to exercise any of the rights or privileges granted hereunder and such receiver be so discharged with a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by LICENSEE and LICENSOR, at the election of LICENSOR, but not otherwise, ipso facto, and without notice or other action by LICENSOR shall terminate this Agreement and all rights of LICENSEE hereunder and all rights of any and all persons claiming under LICENSEE.

14.3 LICENSEE shall have the right to terminate this Agreement by providing ninety (90) days written notice of its intent to terminate this Agreement to LICENSOR.

14.4 Any termination of this Agreement shall be without prejudice to LICENSOR's right to recover all amounts accruing to LICENSOR prior to such termination and cancellation. Except as otherwise provided, should this Agreement be terminated for any reason, LICENSEE shall have no rights, express or implied, under any patent property which is the subject matter of this Agreement, nor have the right to recover any royalties paid LICENSOR hereunder. Upon termination, LICENSEE shall have the right to dispose of Licensed Products then in their possession and to complete existing contracts for such products, so long as contracts are completed within six (6) months from the date of termination, subject to the payment of royalties to LICENSOR as provided in Section 8 hereof.

15. CERTIFICATE OF INSURANCE:

151.1 LICENSEE shall maintain liability insurance coverage for the Product in the amount of XXXX dollars ($XXXX) and at no expense to LICENSOR, LICENSEE shall name LICENSOR an additional insured. Within fourteen (14) days of execution of this Agreement, LICENSEE shall provide a certificate of insurance to LICENSOR. LICENSEE agrees to carry and keep in force, at its expense, general liability insurance with limits not less than $XXXX per person and $XXXX aggregate to cover liability for damages on account of bodily or personal injury or death to any person or damage to property of any person. Such insurance shall contain an endorsement naming the University of Miami as an additional insured with respect to this Agreement. Insurance Certificates should be sent to the University of Miami upon execution of this Agreement and on the anniversary of that date every year thereafter, Office of Technology Transfer, 1475 NW 12th Avenue, Sewell Building Room 2012, Miami, Florida 33136.

15.2 Licensee shall not cancel such insurance without thirty (30) days prior notice to Licensor. Such cancellation shall be cause for termination.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

15.3 The terms of this provision shall extend beyond termination of the agreement.

16. USE OF NAME:

LICENSEE shall not use the name of the University of Miami, or any of its employees, or an adaptation thereof, in any publication, including advertising, promotional or sales literature without the prior written consent of Mr. Humberto Speziani, Assistant Vice President, 327 Max Orovitz Bldg., 1507 Levante Avenue, Coral Gables, FL 33124-1432. LICENSOR shall notify LICENSEE within ten (10) days of being provided notice of its decision regarding each instance of intended use of name(s) names (s). The absence of a response by LICENSOR within this ten (10) day period shall constitute implied permission for LICENSEE to use such name in that instance. Any press releases concerning this Agreement must be mutually agreed upon by the parties.

17. GOVERNING LAW:

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Florida. Any dispute arising out of this Agreement shall be heard in a court of competent jurisdiction located in Miami-Dade County, Florida.

18. CAPTIONS:

The captions and paragraph heading of this Agreement are solely for the convenience of reference and shall not affect its interpretation.

19. SEVERABILITY:

Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such par t or provision in valid and enforceable manner, and the remainder of the Agreement shall remain binding upon the parties hereto.

20. SURVIVAL:

20.1 the provisions of Sections 5, 6 and 7 shall survive the termination or expiration of this Agreement and shall remain in full force and effect.

20.2 The provisions of this Agreement which do not survive termination or expiration hereof (as the case may be) shall, nonetheless, be controlling on, and shall be used in construing and interpreting the rights and obligations of the parties hereto with regard to any dispute, controversy or claim which may arise under, out of, in connection with, or relating to this Agreement.

21. AMENDMENT:

No amendment or modification of the terms of this Agreement shall be binding on either party unless reduced to writing and signed by an authorized officer of the party to be bound.

22. WAIVER:

No failure or delay on the part of a party in exercising any right hereunder will operate as a waiver of, or impair, such right. No single or partial exercise of any such right will preclude any other of further exercise thereof or the exercise of any other right. No waiver of any such right will be declared a waiver of any other right hereunder.

23. CONFIDENTIALITY:

Each Party shall maintain all information of the other Party which is treated by such other Party as proprietary or confidential (referred to herein as "Confidential Information") in confidence, and shall not disclose, divulge or otherwise communicate such confidential information to others, or use it for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this Agreement, and each party hereby agrees to exercise every reasonable precaution to prevent and restrain the unauthorized disclosure of such confidential information by any of its Affiliates, directors, officers, employees, consultants, subcontractors, sublicensees or agents. LICENSEE's Confidential Information includes but is not limited to the development plan, development reports and all other financial and business reports, strategies, and agreements (including sublicenses) of LICENSEE. The parties agree to keep the terms of the Agreement confidential, provided that each party may disclose

this Agreement to their authorized agents and investors who are bound by similar confidentiality provisions. Notwithstanding the foregoing, confidential Information of a party shall not include information which: (a) was Lawfully known by the receiving party prior to disclosure of such information by the disclosing party to the receiving party; (b) was or becomes generally available in the public domain, without the fault of the receiving party; (c) is subsequently disclosed to the receiving party by a third party having a lawful right to make such disclosure; (d) is required by law, rule, regulation or legal process to be disclosed, provided that the receiving party making such disclosure shall take all reasonable steps to restrict and maintain to the extent possible confidentiality of such disclosure and shall provide reasonable notice to the other party to allow such party the opportunity to oppose the required disclosure; or (e) has been independently developed by employees or others on behalf of the receiving party without access to or use of disclosing party's information as demonstrated by written record. Each party's obligations under this Section shall extend for a period of five (5) years from termination or expiration of this Agreement.

24. UNIVERSITY RULES AND REGULATIONS:

LICENSEE understands and agrees that University of Miami personnel who are engaged by LICENSEE, whether as consultants, employees or otherwise, or who possess a material financial interest in LICENSEE, are subject to the University of Miami's rule regarding outside activities and financial interests, and the University of Miami's Intellectual Property Policy. Any term or condition of an agreement between LICENSEE and such University of Miami personnel which seeks to vary or override such personnel's obligations to the University of Miami may not be enforced against such personnel, or the University of Miami, without the express written consent of an individual authorized to vary or waive such obligations on behalf of the University of Miami.

25. ENTIRE AGREEMENT:

This Agreement constitutes the entire agreement between the parties hereto respecting the subject matter hereof, and supersedes and terminates all prior agreements respecting the subject matter hereof, whether written or oral, and may be amended only by an instrument in writing executed by both parties hereto.

26. CONTRACT FORMATION AND AUTHORITY:

LICENSOR AND LICENSEE each warrant and represent that the persons signing this Agreement on its behalf have authority to execute this Agreement and that the execution of this Agreement does not violate any law, rule or regulation applicable to it or any contract of other agreement by which it is bound.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

HEAT BIOLOGICS, INC.

Date: 2/18/11 By: /s/ Jeffrey Wolf

Jeffrey Wolfe
Name

CEO
Title

UNIVERSITY OF MIAMI

Date: 2/14/11 By: /s/ Humberto M. Speziani

Humberto M Speziani
Name

Assistant Vice President
Finance
Title

EXHIBIT 10.4

LICENSE AGREEMENT

This License Agreement (the "Agreement") is entered into and made effective the18 day of Feb, 2011 (the "Effective Date") between UNIVERSITY OF MIAMI and its School of Medicine, whose principal place of business is at 1600 N.W. 10th Avenue, Miami, Florida 33136 (hereinafter referred to as "LICENSOR") and HEAT BIOLOGICS 1, INC., a Delaware corporation, whose principal place of business is at Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 33139 (hereinafter referred to as "LICENSEE").

WITNESSETH

WHEREAS, HEAT BIOLOGICS, Inc., a Delaware Corporation ("HEAT"') is the majority shareholder of the LICENSEE, With effect of July 11, 2008, HEAT and the LICENSOR have entered into a license agreement regarding the Podack Cancer Vaccine (UM97-14) which was later assigned to the LICENSEE (hereinafter also referred to herein as the "Podack Cancer Vaccine License Agreement");

WHEREAS, LICENSOR is the sole owner of the technology and product identified as the Heat Shock Protein GP96 Vaccination (UMD-107) technology;

WHEREAS, LICENSOR is the sole owner of the patent rights relating to the Heat Shock Protein GP96 Vaccination (UMD-107) technology;

WHEREAS, LICENSOR wishes to exclusively license to LICENSEE the Heat Shock Protein GP96 Vaccination (UMD-107) technology and patent rights related thereto; and

WHEREAS, LICENSEE desires to acquire an exclusive license from LICENSOR to the Heat Shock Protein GP96 Vaccination (UMD-107) technology and patent rights related thereto for the purpose of commercially marketing the Heat Shock Protein GP96 Vaccination (UMD-107) technology.

NOW THEREFORE, For these and other valuable considerations, the receipt of which is hereby acknowledged, the parties agree as follows:

1. DEFINITIONS:

1.1 "Affiliate" shall mean any corporation or other business entity controlled by, controlling or under common control with LICENSEE. For this purpose, "control" shall mean direct or indirect beneficial ownership of at least a fifty percent (50%) of the voting stock of, or at least a fifty percent (50%) interest in the income of such corporation or other business entity, or such other relationship as in fact, constitutes actual control.

1.2 "Sublicensee" as used in this Agreement shall mean any third party to whom LICENSEE has granted a license to make, have made, use and/or sell the Product under the Patent Rights, provided said third party has agreed in writing with LICENSEE to accept the conditions and restrictions agreed to by LICENSEE in this Agreement.

1.3 "Patent Rights" shall mean the following United States Patent applications: U.S. patent application serial number US 61/033,425 entitled "Heat Shock Protein GP96 Vaccination and Methods of Using Same" and filed on 20 March 2008; PCT patent application number PCT/US2009/001727 entitled "bleat Shock Protein GP96 Vaccination and Methods of Using Same" and filed on 19 March 2009; all United States patents and foreign patents and patent applications based on these U.S. applications; all divisionals, continuations of the foregoing; and those claims in continuations-in-part of the foregoing that are described in sufficient detail in U.S. patent application serial number US 61/033,425 or PCT patent application number PCT/US2009/001727 to meet the requirements of 35 U.S.C. 112¶1; and any re-examinations or reissues of the foregoing.

1.4 "Licensed Product" shall mean any product or part thereof which:

(a) is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights;

(b) is manufactured by using a process which is covered in whole or in part by an issued, unexpired, and. not adjudicated unenforceable claim or a pending claim contained in the Patent Rights; or

(c) incorporates or comprises the Licensed Materials ,

1.5 "Licensed Process" shalt mean any process practiced in a country in which said process is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or pending claim contained in the Patent Rights.

1.6 "Net Sales" shall mean the sum of all amounts invoiced on account of sale or use of Licensed Products and Licensed Processes by LICENSEE and its Affiliates or any Sublicensees to non-affiliated third party purchasers or users of Licensed Products or Licensed Processes, less (a) discounts to purchasers in amounts customary in the trade, (b) amounts for transportation or shipping charges to purchasers, (c) credits for returns, allowances or trades, and (d) taxes and duties levied on the sale or use of Licensed Products, whether absorbed by Licensee or paid by the purchaser.

1.7 "Territory" shall mean worldwide,

1.8 "Field of Use" shall mean all human healthcare and research applications.

1.9 "Licensed Materials" shall mean LICENSOR's biological materials in the possession of Dr. Eckhard Podack's laboratory at the Effective Date that are covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights.

2. GRANT:

2.1 LICENSOR hereby grants to LICENSEE an exclusive license, subject to any rights of the U.S. government specified in section 4 below, in the Territory for the Field of Use, with the right to sublicense, under the Patent Rights, to make, have made for its own use and sale, use and sell Licensed Products and Licensed Processes.

2.2 LICENSOR also hereby grants to LICENSEE an exclusive license to make, use, and/or sell the Licensed Materials in the Territory for the Field of Use. At LICENSEE's request, LICENSOR shall provide LICENSEE with a reasonable amount of

Licensed Materials so that LICENSEE may reproduce such Licensed Materials for the purpose of making, selling, or using Licensed Products or Licensed Processes.

2.3 LICENSOR reserves to itself the non-transferable right to make and use Licensed Materials, Licensed Products arid/or Licensed Processes solely for its internal, non-commercial: scientific research, not-for-profit clinical research, and educational purposes. Except to the extent required by law, LICENSOR shall not transfer the Licensed Materials for the purpose of making the Licensed Materials to any third party without first obtaining, in a Material Transfer Agreement, the written agreement of that third party to not use or further distribute such materials for commercial purposes, LICENSOR shall notify LICENSEE in writing of any third party request for such materials and provide LICENSEE at least ten (10) days to object to such request on the basis that such transfer would interfere with the objectives of this Agreement.

3. TERM:

The license granted by this Agreement shall be exclusive in the licensed Field of Use for a terra commencing as of the Effective Date of this Agreement and continue until the expiration, on a country by country basis, of all of the Patent Rights.

4. UNITED STATES LAWS:

4.1 Licensee understands that the Licensed Subject Matter may have been developed under a funding agreement with the Government of the United States of America and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any agreement and any applicable law or regulation. If there is a conflict between an agreement, applicable law or regulation and this Agreement, the terms of the Government agreement, applicable law or regulation shall prevail.

Specifically, This Agreement is subject to all of the terms and conditions of Title 35 United States Code sections 200 through 204, including an obligation that Licensed Product(s) sold or produced in the United States be "manufactured substantially in the United States," and LICENSEE agrees to take all

reasonable action necessary on its part as licensee to enable LICENSOR to satisfy its obligation thereunder, relating to Invention(s).

4.2 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. LICENSOR neither represents that a license shall not be required nor that, if required, it shall be issued.

5. PATENT PROTECTION AND INFRINGEMENT:

5.1 LICENSOR, during the term of this Agreement, is responsible for the filing and the prosecution of all patents and applications where LICENSEE shall reimburse LICENSOR for all payments within thirty (30) days of invoice. LICENSOR shall keep LICENSEE fully apprised on the status of all Patent Rights and shall provide LICENSEE the opportunity to make comments and suggestions on all decisions relating to the prosecution of the Patent Rights (e.g., office actions). LICENSOR shall in good faith consider incorporating such comments and suggestions unless such incorporation would be contrary to the purposes of this Agreement.

5.2 LICENSEE shall promptly notify LICENSOR in writing of any claim of Patent Rights infringement which may be asserted against LICENSEE or LICENSOR, its Affiliates and any sublicensees because of the manufacture, use, promotion and sale of Products.

5.3 LICENSEE reimburse LICENSOR past patent costs and shall pay to LICENSOR all future patent fees within thirty (30) days after the LICENSEE has received the invoice from the LICENSOR.

5.4 LICENSEE will defend, indemnify and hold harmless LICENSOR, its trustees, officers, directors, employees and its Affiliates against any and all judgments

and damages arising from any and all third party claims of Patent Rights infringement which may be asserted against LICENSOR, and Affiliates because of the manufacture, use, promotion and sale of Licensed Products except for the use of Licensed Materials, Licensed Products and/or Licensed Processes by Licensor pursuant to section 2.3 of this Agreement. LICENSEE will bear all costs and expenses incurred in connection with the defense of any such claims: or as a result of any settlement made or judgment rendered on the basis of such claims. LICENSOR shall have no further liability to LICENSEE for any loss or damages LICENSEE may incur as a result of the invalidity of LICENSOR'S Patent Rights. LICENSOR will have the right, but not the obligation to retain counsel at its expense in connection with any such claim. LICENSOR at its option, shall have the right, within thirty days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

5.5 Upon learning of any infringement of Patent Rights by third parties in any country, LICENSEE and LICENSOR will promptly inform each other, as the case may be, in writing of that fact and will supply the other with any available evidence pertaining to the infringement. LICENSEE at; its own expense, shall have the option to take whatever steps are necessary to stop the infringement at its expense and recover damages therefore. If requested by LICENSEE, LICENSOR will join in any legal actions enforcing or defending the Patent Rights against third parties deemed necessary or advisable by LICENSEE to prevent or seek damages, or both, from the infringement of the Patent Rights provided that LICENSEE funds all costs associated with such actions, using counsel mutually acceptable to LICENSEE and LICENSOR, and indemnifies and holds LICENSOR harmless with respect to any claims or damages made against or sustained by LICENSOR in connection with such involvement. In the event that LICENSOR and LICENSEE mutually bring suit, costs and expenses shall be borne by LICENSEE, and any recovery shall be shared by the parties as if such infringing sales were Net Sales. In any event, no settlement, consent, judgment or other voluntary final disposition of the suit may be entered into without the consent of LICENSOR, which shall not be unreasonably withheld. In the event LICENSEE does not take steps to stop the infringement, LICENSOR, shall have the right to bring suit at its own expense. In such event, financial recoveries will be entirely retained by LICENSOR.

5.6 LICENSOR shall have no responsibility with respect to LICENSEE'S own trademarks and tradename, and LICENSEE in respect to the use thereof will defend; indemnify and hold harmless LICENSOR against any and all third party claims.

6. INDEMNIFICATION:

6.1 LICENSEE agrees to release, indemnify and hold harmless the LICENSOR, its trustees, officers, faculty, employees and students against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSOR, its trustees, officers, faculty, employees or students as a result of or arising out of any negligent act or omission of LICENSEE, its agents, or employees, or arising out of use, production, manufacture, sale, lease, consumption or advertisement by LICENSEE or any Sublicensee of any Licensed Product, Licensed Process, or Licensed Materials covered by this Agreement.

6.2 LICENSOR agrees to release, indemnify and hold harmless the LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and agents against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSEE, its directors, officers, employees, Affiliates, Sublicensees, and/or agents as a result of or arising out of any willful misconduct, or negligent act or omission of LICENSOR.

6.3 This Agreement to reimburse and indemnify under the circumstances set forth above shall continue after the termination of this Agreement.

7. REPRESEN'TATIONS WARRA.NTIES:

7.1 LICENSOR hereby represents and warrants to LICENSEE that LICENSOR owns the Patent Rights and Licensed Materials and has not assigned any rights therein or given any license or other rights thereto to any party other than LICENSEE.

7.2 LICENSOR hereby represents and warrants that, although it has not conducted any investigation, it has no knowledge of any patents or patent applications, other than the Patents Rights, that contain a claim that would be infringed by the sale or use of a Licensed Product, Licensed Process, .or Licensed Materials.

7.3 EXCEPT AS PROVIDED ABOVE, LICENSOR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL SUCH WARRANTIES, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE CONDITION OF ANY INVENTION(S) OR PRODUCT, WHETHER TANGIBLE OR INTANGIBLE, LICENSED UNDER THIS AGREEMENT; OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE INVENTION OR PRODUCT; OR THAT THE USE OF THE LICENSED PRODUCT WILL NOT INFRINGE ANY PATENT, COPYRIGHTS, TRADEMARKS, OR OTHER RIGHTS. OTHER THAN FOR BREACH OF T HE ABOVE WARRANTIES, OR ITS OWN NEGLIGENT ACTS OR OMISSIONS, LICENSOR SHALL NOT BE LIABLU FOR ANY DIRECT, CONSEQUENTIAL, OR OTHER DAMAGES SUFFERED BY ANY LICENSEE OR ANY THIRD PARTIES RESULTING FROM THE USE, PRODUCTION, MANUFACTURE, SALE, LEASE, CONSUMPTION, OR ADVERTISEMENT OF THE PRODUCT.

7.4 EXCEPT EXPLICITLY PROVIDED FOR HEREIN, LICENSEE DOES NOT MAKE ANY OTHER REPRESENTATIONS OR GIVE ANY OTHER EXPLICIT OR IMPLICIT WARRANTIES. TO THE FULLEST EXTENT PERMITTED BY LAW LICENSEE HEREBY DISCLAIMS ANY OTHER REPRESENTATIONS AND WARRANTIES.

7.5 The provisions of this Section shall continue beyond the termination of this Agreement.

8. ROYALTIES:

8.1 In consideration of the license herein granted, LICENSEE shall pay royalties to LICENSOR as follows:

(a) LICENSEE agrees to pay to LICENSOR as earned royalties a royalty calculated as a percentage of LICENSEE's Net Sales of

Licensed Products which, if not for this Agreement, would infringe the Patent Rights, in accordance with the terms and conditions of this Agreement. The royalty is deemed earned as of the earlier of the date the Licensed Product and/or Licensed Process is actually sold and paid for, the date an invoice is sent by LICENSEE, or the date a Licensed Product and/or Licensed Process is transferred to a third party for any promotional reasons. The royalty shall remain fixed while this Agreement is in effect at a rate of XXXX percent (XXXX%) of Net Sales.

(b) For a sublicense, LICENSEE shall pay to LICENSOR an amount equal to XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee. In addition, if LICENSEE receives any fees, minimum royalties, or other payments in consideration for any rights granted under a Sublicense, and such payments are not based directly upon the amount or value of Licensed Products or Licensed Processes sold by the Sublicensee nor represent payment of costs to LICENSEE for a development program which LICENSEE is obligated to perform under such sublicense,, then LICENSEE shall pay LICENSOR XXXX percent (XXXX%) of such payments.

(c) In the event that licenses from third parties are required by LICENSEE in order to make, have made, use, sell, offer to sell or import any particular Licensed Product or Licensed Process, then the earned royalty which LICENSEE is obligated to pay LICENSOR under this Agreement shall be reduced by XXXX ($XXXX) for each one dollar ($1.00) in royalties which Licensee is obligated to pay to third parties under such licenses, further provided, however, that the royalties payable to LICENSOR under this Section shall not be reduced to less than XXXX percent (XXXX%) of the applicable Net Sales.

(d) In the event that LICENSEE requires more than one license from the LICENSOR to make, have made for its use, sell, offer to sell or import any particular Licensed Product or Licensed Process as defined in sections 1.4 and 1.5, respectively, of this Agreement, then the combined earned royalties shall not exceed XXXX% of Net Sales and any sublicense fees shall not exceed XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee.

8.2 All payments shall be made hereunder in U.S. dollars; provided however, that if the proceeds of the sales upon which such royalty payments are based are received by the LICENSEE in a foreign currency or other form that is not convertible or exportable in dollars, and the LICENSEE does not have ongoing business operations or bank accounts in the country in which the currency is not convertible or exportable, the LICENSEE shall pay such royalties in the currency of the country in which such sales were made by depositing such royalties in LICENSER'S name in a bank designated by LICENSOR in such country. Royalties in U.S. dollars shall be computed by converting the royalty in the currency of the country in which the sales were made at the exchange rate for U.S. dollars prevailing at the close of the business day of the LICENSEE'S quarter for which royalties are being calculated as published the following day in the Wall Street Journal (or, if it ceases to be published, a comparable publication to be agreed upon from time to time by the parties), and with respect to those countries for which rates are not published in the Wall Street Journal, the exchange rate fixed for such date by the appropriate United States governmental agency.

8.3 In the event the royalties set forth herein are higher than the maximum royalties permitted by the law or regulations of a particular country, the royalty payable for sales in such country shall be equal to the maximum permitted royalty under such law or regulation.

8.4 In the event that any taxes, withholding or otherwise, are levied by any taxing authority in connection with accrual or payment of any royalties payable to LICENSOR under this Agreement, the LICENSEE shall have the right to pay such taxes

to the local tax authorities, on behalf of LICENSOR and the payment to LICENSOR of the net amount due after reduction by the amount of such taxes, shall fully satisfy the LICENSEE'S royalty obligations under this Agreement.

9. DILIGENCE:

9.1 LICENSEE shall use efforts at least sufficient to meet the requirements of the Bayh-Dole Act to manufacture, market and sell the Licensed Products in the Territory, and to create a demand for the Products.

9.2 LICENSEE agrees to submit reports, upon LICENSOR's request but no more than every 6 months as to its efforts to develop markets for the Licensed Products. Such reports shall include assurance by LICENSEE of its intent to actively develop commercial embodiments of Licensed Products and a summary of its efforts in this regard.

9.3 Unless LICENSEE has introduced a Licensed Product into the commercial marketplace in one of the three major markets (European Union, Japan and the United States) or has made best efforts (for avoidance of doubt it will be presumed that LICENSEE has used best efforts if it has a Licensed Product in a phase III clinical trial) to achieve the same prior to December 31, 2020 LICENSEE agrees that LICENSOR may terminate this Agreement by providing LICENSEE ninety (90) advanced written notice of its intent to terminate this Agreement. In the event the payment of earned royalties, once begun and if any are due, ceases for more than two (2) calendar quarters, and LICENSEE fails to cure this breach within two (2) months after being provided written notice of same, LICENSOR may terminate this Agreement.

10. REPORTS AND RECORDS:

10.1 Commencing one (1) year after the first sale, the LICENSEE shall furnish to LICENSOR a report in writing specifying during the preceding calendar quarter (a) the number or amount of Licensed Products sold hereunder by LICENSEE, and/or its Affiliates or Sublicensees, (b) the total billings for all. Licensed Products sold, (c) deductions as applicable in paragraph 1.6, (d) total royalties due, (e) names and addresses of all Sublicensees. Such reports shall be due within forty-five (45) days following the

last day of each calendar quarter in each year during the term of this Agreement. Each such report shall be accompanied by payment in full of the amount due LICENSOR in United States dollars calculated in accordance with Section 8.1 hereof.

10.2 For a period of three (3) years from the date of each report pursuant to Paragraph 10. 1, LICENSEE, shall keep records adequate to verify each such report and accompanying payment made to LICENSOR under this Agreement, and an independent certified public accountant or accounting firm selected by LICENSOR and acceptable to LICENSEE may have access, on reasonable notice during regular business hours, not to exceed once per year, to such records to verify such reports and payments. Such accountant or accounting firm shall not disclose to LICENSOR any information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the certified public accountant or accounting firm performing such verification shall be borne by LICENSOR unless in the event that the audit reveals an underpayment of royalty by more than ten (10%) percent, the cost of the audit shall be paid by LICENSEE.

10.3 LICENSOR shall promptly inform LICENSEE of all Improvements (including results of all clinical trials) made during the term of the Agreement. LICENSEE shall keep each Improvement confidential for a period of ninety (90) days following its disclosure to LICENSEE in order to provide sufficient time to file a patent application on said Improvement.

11, MARKING AND STANDARDS:

11 .lLICENSEE agrees to mark and have sublicensees mark Licensed Products (or their containers or labels) made, sold, or otherwise disposed of by it under the license granted in this Agreement with a proper patent notice as specified under the patent laws of the United States.

11.2 LICENSEE further agrees to maintain satisfactory standards in respect to the nature of the Licensed Products manufactured and/or sold by LICENSEE. LICENSEE, agrees that all Licensed Products manufactured and/or sold by it shall be of a quality which is appropriate to products of the type here involved. LICENSEE agrees that similar provisions shall be included in sublicenses of all tiers.

12. ASSIGNMENT:

12.1 This Agreement is not assignable by LICENSEE or by operation of law without the prior written consent of LICENSOR at its sole discretion except that LICENSEE shall have the right to transfer or assign this Agreement to any entity which acquires all or substantially all of LICENSEE's assets provided that LICENSEE gives LICENSOR thirty (30) days advance written notice of the intended assignment and considers in good faith any of LICENSOR's concerns relating to the intended assignment.

The foregoing sentence shall not be construed to require LICENSEE to obtain LICENSOR's approval of any Sublicensee.

12.2 This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of LICENSOR and LICENSEE.

13. NOTICE:

Any notice, payment, report or other correspondence (hereinafter collectively referred to as "correspondence") required or permitted to be given hereunder shall be mailed by certified mail or delivered by hand to the party to whom such correspondence is required or permitted to be given hereunder. If mailed, any such notice shall be deemed to have been given when mailed as evidenced by the postmark at point of mailing. If delivered by hand, any such correspondence shall be deemed to have been given when received by the party to whom such correspondence is given, as evidenced by written and dated receipt of the receiving party.

All correspondence to LICENSEE shall be addressed as follows:

Mr. Jeffrey Wolf
CEO
Heat Biologics, Inc.
Atlantic Center
119 Washington Avenue, Suite 401
Miami Beach, FL 33139

All. correspondence to LICENSOR shall be addressed, in duplicate, as follows:

FOR NOTICE:

Assistant Vice President Treasurer
327 Max Orovitz Building
1507 Levante Avenue
Coral Gables, Florida 33124-1432
Attention: Mr. Humberto Speziani

FOR NOTICE AND PAYMENT:

Office of Technology Transfer
1475 NW 12th Avenue, Suite 2012
Miami, FL 33136

Either party may change the address to which correspondence to it is to be addressed by notification as provided herein.

14. TERMINATION:

14.1 A party shall have the right to terminate this Agreement if the other party commits (a) a material breach of an obligation under this Agreement or (b) provides a false report, and continues in breach for more than ninety (90) days after receiving unambiguous written notice of such breach or false report; however, in the event LICENSEE breaches its obligations under Sections five (5) or eight (8) above, LICENSEE shall have thirty (30) days after receiving written notice to cure such breach, after which LICENSOR shall have the right to terminate this Agreement. Such termination shall be effective upon further written notice to the breaching party after failure by the breaching party to cure such default.

14.2 The license and rights granted in this Agreement have been granted on the basis of the special capability of LICENSEE to perform research and development work leading to the manufacture and marketing of the Products, Accordingly, LICENSEE covenants and agrees that in the event any proceedings under the Bankruptcy Act or any amendment thereto, be commenced by or against LICENSEE, and, if against LICENSEE, said proceedings shall not be dismissed with prejudice before either an adjudication in bankruptcy or the confirmation of a composition, arrangement, or plan of reorganization, or in the event LICENSEE shall be adjudged insolvent or make an assignment for the benefit of its creditors, or if a writ of attachment or execution be levied upon the license hereby created and not be released or satisfied within ten (10) days thereafter, or if a receiver be appointed in any proceeding or action to which LICENSEE is a party with authority to exercise any of the rights or privileges granted hereunder and such receiver be so discharged within a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by LICENSEE and, LICENSOR, at the election of LICENSOR., but not otherwise, ipso facto, and without notice or other action by LICENSOR, shall terminate this Agreement and all rights of LICENSEE hereunder and all rights of any and all persons claiming under LICENSEE.

14.3 LICENSEE shall have the right to terminate this Agreement by providing ninety (90) days written notice of its intent to terminate this Agreement to LICENSOR.

14.4 Any termination of this Agreement shall be without prejudice to LICENSOR's right to recover all amounts accruing to LICENSOR prior to such termination and cancellation. Except as otherwise provided, should this Agreement be terminated for any reason, LICENSEE shall have no rights, express or implied, under any patent property which is the subject matter of this Agreement, nor have the right to recover any royalties paid LICENSOR hereunder. Upon termination, LICENSEE shall have the right to dispose of Licensed Products then in their possession and to complete existing contracts for such products, so long as contracts are completed within six (6) months from the date of termination, subject to the payment of royalties to LICENSOR as provided in Section 8 hereof.

15. CERTIFICATE OF INSURANCE:

15.1 LICENSEE shall maintain liability insurance coverage for the Product in the amount of XXXX dollars. ($XXXX) and at no expense to LICENSOR, LICENSEE shall name LICENSOR as an additional insured. Within fourteen (14) days of execution of this Agreement, LICENSEE shall provide a certificate of insurance to LICENSOR. LICENSEE agrees to carry and keep in force, at its expense, general liability insurance with limits not less than $XXXX per person and $XXXX aggregate to cover liability for damages on account of bodily or personal injury or death to any person, or damage to property of any person. Such insurance shall contain an endorsement naming the University of Miami: as an additional insured with respect to this Agreement. Insurance Certificates should be sent to the University of Miami upon execution of this Agreement and on the anniversary of that date every year thereafter, Office of Technology Transfer, 1475 NW 12th Avenue, Sewell Building Room 2012, Miami, Florida 33136.

15.2 Licensee shall not cancel such insurance without thirty (30) days prior notice to Licensor. Such cancellation shall be cause for termination.

15.3 The terms of this provision shall extend beyond termination of the agreement.

16. USE OF NAME:

LICENSEE shall not use the name of the University of Miami, or any of its employees, or any adaptation thereof, in any publication, including advertising, promotional or sales literature without the prior written consent of Mr. Humberto Speziani, Assistant Vice President, 327 Max Orovitz Bldg., 1507 Levante Avenue, Coral Gables, FL 33124-1432. LICENSOR shall notify LICENSEE within ten (10) days of being provided notice of its decision regarding each instance of intended use of name(s) name(s). The absence of a response by LICENSOR within this ten (10) day period shall constitute implied permission for LICENSEE', to use such name in that instance. Any press releases concerning this Agreement must be mutually agreed upon by the parties.

17. GOVERNING LAW:

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Florida. Any dispute arising out of this Agreement shall be heard in a court of competent jurisdiction located in Miami-Dade Country, Florida.

18. CAPTIONS:

The captions and paragraph heading of this Agreement are solely for the convenience of reference and shall not affect its interpretation.

19. SEVERABILITY:

Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in valid and enforceable manner, and the remainder of the Agreement shall remain binding upon the parties hereto.

20. SURVIVAL:

20.1 The provisions of Sections 5, 6 and 7 shall survive the termination or expiration of this Agreement and shall remain in full force and effect.

20.2 The, provisions of this Agreement which do not survive termination or expiration hereof (as the case may be) shall, nonetheless, be controlling on, and shall be used in construing and interpreting, the rights and obligations of the parties hereto with regard to any dispute, controversy or claim which may arise under, out of, in connection with, or relating to this Agreement.

21. AMENDMENT:

No amendment or modification of the terns of this Agreement shall be binding on either party unless reduced to writing and signed by an authorized officer of the party to be bound.

22. WAIVER:

No failure or delay on the part of a party in exercising any right hereunder will operate as a waiver of, or impair, any such right. No single or partial exercise of any such right will preclude any other or further exercise thereof or the exercise of any other right. No waiver of any such right will be deemed a waiver of any other right hereunder.

23. CONFIDENTIALITY:

Each Party shall maintain all information of the other Party which is treated by such other Party as proprietary or confidential (referred to herein as "Confidential Information") in confidence, and shall not disclose, divulge or otherwise communicate such confidential information to others, or use it for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this Agreement, and each party hereby agrees to exercise every reasonable precaution to prevent and restrain the unauthorized disclosure of such confidential information by any of its Affiliates, directors, officers, employees, consultants, subcontractors, sublicensees or agents. LICENSEE's Confidential Information includes but is not limited to the development plan, development reports and all other financial and business reports, strategies, and agreements (including sublicenses) of LICENSEE. The parties agree to keep the terms of this Agreement confidential, provided that each party may disclose this Agreement to their authorized agents and investors who are bound by similar confidentiality provisions. Notwithstanding the foregoing, Confidential Information of a party shall not include information which: (a) was lawfully known by the receiving party prior to disclosure of such information by the disclosing party to the receiving party; (b) was or becomes generally available in the public domain, without the fault of the receiving party; (c) is subsequently disclosed to the receiving party by a third party having a lawful right to make such disclosure; (d) is required by law, rule, regulation or legal process to be disclosed, provided that the receiving party making such disclosure shall take all reasonable steps to restrict and maintain to the extent possible confidentiality of such disclosure and shall provide reasonable notice to the other party to allow such party the opportunity to oppose the required disclosure; or (e) has been independently developed by employees or others on behalf of the receiving party without access to or use of disclosing party's information as demonstrated by written record. Each party's obligations under this Section shall extend for a period of five (5) years from termination or expiration of this Agreement.

24. UNIVERSITY RULES AND REGULATIONS:

LICENSEE understands and agrees that University of Miami personnel who are engaged by LICENSEE, whether as consultants, employees or otherwise, or who possess a material financial interest in LICENSEE, are subject to the University of-Miami's rule regarding outside activities and financial interests, and the University of Miami's Intellectual Property Policy. Any term or condition of an agreement between LICENSEE and such University of Miami personnel which seeks to vary or override such personnel's obligations to the University of Miami may not be enforced against such personnel, or the University of Miami, without the express written consent of an individual authorized to vary or waive such obligations on behalf of the University of Miami.

25. ENTIRE AGREEMENT:

This Agreement constitutes the entire agreement between the parties hereto respecting the subject matter hereof, and supercedes and terminates all prior agreements respecting the subject matter hereof, whether written or oral, and may be amended only by an instrument in writing executed by both parties hereto.

26. CONTRACT FORMATION AND AUTHORITY:

LICENSOR and LICENSEE each warrant and represent that the persons signing this Agreement on its behalf have authority to execute this Agreement and that the execution of this Agreement does not violate any law, rule or regulation applicable to it or any contract or other agreement by which it is bound.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

[**SIGNATURE PAGE FOLLOWS**]

HEAT BIOLOGICS, INC.

Date: 2/18/11 By: /s/ Jeffrey Wolf

Jeffrey Wolfe
Name

CEO
Title

UNIVERSITY OF MIAMI

Date: 2/14/11 By: /s/ Humberto M. Speziani

Humberto M Speziani
Name

Assistant Vice President
Finance
Title

EXHIBIT 10.5

CONTROL # 20844

LICENSE AGREEMENT

This License Agreement (the "Agreement") is entered into and made effective the18 day of Feb., 2011 (the "Effective Date") between UNIVERSITY OF MIAMI and its School of Medicine, whose principal place of business is at 1600 N.W. 10th Avenue, Miami, Florida 33136 (hereinafter referred to as "LICENSOR") and HEAT BIOLOGICS I, INC., a Delaware corporation, whose principal place of business is at Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 33139 (hereinafter referred to as "LICENSEE").

WITNESSETH

WHEREAS, HEAT BIOLOGICS, Inc., a Delaware Corporation, ("HEAT") is the majority shareholder of the LICENSEE. With effect of July 11, 2008, HEAT and the LICENSOR have entered into a license agreement regarding the Podack Cancer Vaccine (UM97-14) which was later assigned to the LICENSEE (hereinafter also referred to Herein as the "Podack Cancer Vaccine License Agreement");

WHEREAS, LICENSOR is the sole owner of the technology and product identified as the Allogeneic Cancer Cell-based immunotherapy (UMSS114A) technology;

WHEREAS, LICENSOR is the sole owner of the patent rights relating to the Allogeneic Cancer Cell-based Immunotherapy (UMSS114A) technology

WHEREAS, LICENSOR wishes to exclusively license to LICENSEE the Allogeneic Cancer Cell-based Immunotherapy (UMSS114A) technology and patent rights related thereto:

WHEREAS, as partial consideration for the license granted herein, HEAT's subsidiary Heat Biologics II is willing to amend the July 18, 2008 license agreement between LICENSOR and Heat Biologics II to grant back to LICENSOR the exclusive rights to grant licenses to make, use, and/or sell certain biological materials only ass research reagent(s) and/or research tool(s), including research reagents and research tools for commercial purposes; and

WHEREAS, LICENSEE desires to acquire an exclusive license from LICENSOR to the Allogeneic Cancer Cell-based Immunotherapy (UMSS114A)

technology and patent rights related thereto for the purpose of commercially marketing the Allogeneic Cancer Cell-based Immunotherapy (UMSS114A) technology.

NOW THEREFORE, For these and other valuable considerations, the receipt of which is hereby acknowledged, the parties agree as follows:

1. DEFINITIONS:

1.1 "Affiliate" shall mean any corporation or other business entity controlled by, controlling or under common control with LICENSEE. For this purpose, "control" shall mean direct or indirect beneficial ownership of at least a fifty percent (50%) of the voting stock of, or at least a fifty percent (50%) interest in the income of such corporation or other business entity, or such other relationship as in fact, constitutes actual control.

1.2 "Sublicensee" as used in this Agreement shall mean any third party to whom LICENSEE has granted a license to make, have made, use and/or sell the Product under the Patent Rights, provided said third party has agreed in writing with LICENSEE to accept the conditions and restrictions agreed to by LICENSEE in this Agreement.

1.3 "Patent Rights" shall mean the following United States Patent applications: U.S. patent application serial number US 61/033,425 entitled " Allogeneic Cancer Cell-Based Immunotherapy" and files on 3 March 2008; PCT patent application number PCT/US2009/001330 entitled "Allogeneic Cancer Cell-based Immunotherapy" and filed on 3 March 2009; all United States patents and foreign patents and patent applications based on these U.S. applications; all divisionals, continuations of the foregoing; and those claims in continuations-in-part of the foregoing that are described in sufficient detail in U.S. patent application serial number US 61/033,425 or PCT application number PCT/US2009/001330 to meet the requirements of 35 U.S.C. 112¶1; and any re-examination or reissues of the foregoing.

1.4 "Licensed Product" shall mean any product or part thereof which:

(a) is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights.

(b) is manufactured by using a process which is covered in whole or in party by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights; or

(c) incorporates or comprises the Licensed Materials.

1.5 "Licensed Process: shall mean any process practiced in a country in which said process is covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or pending claim contained in the Patent Rights.

1.6 "Net Sales" shall mean the sum of all amounts invoiced on account of sale or use of Licensed Products and Licensed Processes by LICENSEE and its Affiliates or any Sublicensees to non-affiliated third party purchasers of users of Licensed Products or Licensed Processed, less (a) discounts to purchasers in amounts customary in the trade, (b) amounts for transportation or shipping charges to purchasers, (c) credits for returns, allowances or trades, and (d) taxes and duties levied on the sale or use of Licensed Products, whether absorbed by Licensee or paid by the purchaser.

1.7 "Territory" shall mean worldwide.

1.8 "Field of Use" shall mean all human healthcare and research applications.

1.9 "Licensed Materials" shall mean LICENSOR's biological materials in the possession of Dr. Eckhard Podack's laboratory at the Effective Date that are covered in whole or in part by an issued, unexpired, and not adjudicated unenforceable claim or a pending claim contained in the Patent Rights.

2. GRANT:

2.1 LICENSOR hereby grants to LICENSEE an exclusive license, subject to any rights of the U.S. government specified in section 4 below, in the Territory for the Field of Use, with the right to sublicense, under the Patent rights, to make, have made for its own use and sale, use and sell Licensed Products and Licensed Processes.

2.2 LICENSOR also hereby grants to LICENSEE an exclusive license to make, use, and/or sell the Licensed Materials in the Territory for the Field of Use. At LICENSEE's request, LICENSOR shall provide LICENSEE with a reasonable amount of Licensed Materials so that LICENSEE may reproduce such Licensed Materials for the purpose of making, selling, or using Licensed Products or Licensed Processes.

2.3 LICENSOR reserves to itself the non-transferable right to make and use Licensed Materials, Licensed Products and/or Licensed Processes solely for its internal, non-commercial: scientific research, not-for-profit clinical research, and educational purposes. Except to the extent required by law, LICENSOR shall not transfer the Licensed Materials for the purpose of making the Licensed Materials to any third party without first obtaining, in a Material Transfer Agreement, the written agreement of that third party to not use or further distribute such materials for commercial purposes. LICENSOR shall notify LICENSEE in writing of any third party request for such materials and provide LICENSEE at least ten (10) days to object to such request on the basis that such transfer would interfere with the objectives of this Agreement.

3. TERM:

The license granted by this Agreement shall be exclusive in the licensed Field of use for a term commencing as of the Effective Date of this Agreement and continue until the expiration, on a country by country basis, of all of the Patent Rights.

4. UNITED STATES LAW

4.1 Licensee understands that the Licensed Subject Matter may have been developed under a funding agreement with the Government of the United States of America and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any agreement and any applicable law or regulation. If there is a conflict between an agreement, applicable law or regulation and this Agreement, the terms of the Government agreement, applicable law or regulation shall prevail.

Specifically, this Agreement is subject to all of the terms and conditions of Title 35 United States Code sections 200 through 204, including an

obligation that Licensed Product9s) sold or produced in the United States be "manufactured substantially in the United States," and LICENSEE agrees to take all reasonable action necessary on its part as licensee to enable LICENSOR to satisfy its obligation thereunder, relating to Invention(s).

4.2 It is understood that LICENSOR is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended and the Export Administration Act of 1979), and that is obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. LICENSOR neither represents that a license shall not be required nor that, if required, it shall be issued.

5. PATENT PROTECTION AND INFRINGEMENT

5.1 LICENSOR, during the term of this Agreement, is responsible for the filing and the prosecution of all patents and applications where LICENSEE shall reimburse LICENSOR for all payments within thirty (30) days of invoice. LICENSOR shall keep LICENSEE fully apprised on the status of all Patent Rights and shall provide LICENSEE the opportunity to make comments and suggestions on all decisions relating to the prosecution of the Patent Rights (e.g. office actions). LICENSOR shall in good faith consider incorporating such comments and suggestions unless such incorporation would by contrary to the purposes of this Agreement.

5.2 LICENSEE shall promptly notify LICENSOR in writing of any claim of Patent Rights infringement which may be asserted against LICENSEE or LICENSOR, its Affiliates and any sublicensees because of the manufacture, use, promotion, and sale of Products.

5.3 LICENSEE shall pay to LICENSOR all past patent fees within thirty (30) days of the Effective Date. LICENSEE shall also pay to LICENSOR all future

patent fees within thirty (30) days after the LICENSEE has received the invoice from LICENSOR pertaining to each future patent fee.

5.4 LICENSEE will defend, indemnify and hold harmless LICENSOR, its trustees, officers, directors, employees and its Affiliates against any and all judgments and damages arising from any and all third party claims of Patent Rights infringement which may be asserted against LICENSOR, and Affiliates because of the manufacture, use, promotion and sale of Licensed Products except for the fuse of Licensed Materials, Licensed Products and/or Licensed Processes by Licensor pursuant to section 2.3 of this Agreement. LICENSEE will bear all costs and expenses incurred in connection with the defense of any such claims or as a result of any settlement made or judgment rendered on the basis of such claims. LICENSOR shall have no further liability to LICENSEE for any loss of damages LICENSEE may incur as a result of the invalidity of LICENSOR'S Patent Rights. LICENSOR will have the right, but not the obligation to retain counsel at is expense in connection with any such claim. LICENSOR at its option, shall have the right, within thirty days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

5.5 Upon learning of any infringement of Patent Rights by third parties in any country, LICENSEE and LICENSOR will promptly inform each other, as the case may be, in writing of that fact and will supply the other with any available evidence pertaining to the infringement. LICENSEE at its own expense, shall have the option to take whatever steps are necessary to stop the infringement at its expense and recover damages therefore. If requested by LICENSEE, LICENSOR will join in any legal actions enforcing or defending the Patent Rights against third parties deemed necessary or advisable by LICENSEE to prevent or seek damages, or both, from the infringement of the Patent Rights provided that LICENSEE funds all costs associated with such actions, using counsel mutually acceptable to LICENSEE and LICENSOR, and indemnifies and holds LICENSOR harmless with respect to any claims or damages made against or sustained by LICENSOR in connection with such involvement. In the event that LICENSOR and LICENSEE mutually bring suit, costs and expenses shall be borne by LICENSEE, and any recovery shall be shared by the parties as if such infringing sales were Net Sales. In any event, no settlement, consent, judgment or other voluntary final

disposition of the suit may be entered into without the consent of LICENSOR, which shall not be unreasonably withheld. In the event LICENSEE does not take steps to stop the infringement, LICENSOR shall have the right to bring suit at its own expense. In such event, financial recoveries will be entirely retained by LICENSOR.

5.6 LICENSOR shall have no responsibility with respect to LICENSEE'S own trademarks and trade name, and LICENSEE in respect to the use thereof will defend, indemnify and hold harmless LICENSOR against any and all third party claims.

6. INDEMNIFICATION:

6.1 LICENSEE agrees to release, indemnify and hold harmless the LICENSOR, its trustees, officers, faculty, employees and students against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSOR, or its trustees, officers, faculty, employees or students as a result of or arising out of any negligent act of omission of LICENSEE, its agents, or employees, or arising out of use, production, manufacture, sale, lease, consumption or advertisement by LICENSEE or any Sublicensee of any Licensed Product, Licensed Process, or Licensed Materials covered by this Agreement.

6.2 LICENSOR agrees to release, indemnify and hold harmless the LICENSEE, its directors, officers, employees, Affiliate, Sublicensees, and agents against any and all losses, expenses, claims, actions, lawsuits and judgments thereon (including reasonable attorney's fees through the appellate levels) which may be brought against LICENSEE, its directors, officers, employees, Affiliates Sublicensees, and/or agents as a result of or arising out of nay willful misconduct, or negligent act or omission of LICENSOR.

6.3 This Agreement to reimburse and indemnify under the circumstances set forth above shall continue after the termination of this Agreement.

7. REPRESENTATIONS/WARRANTIES:

7.1 LICENSOR hereby represents and warrants to LICENSEE that LICENSOR owns the Patent Rights and Licensed Materials and has not assigned any rights therein or given any license or other rights thereto to any party other than LICENSEE.

7.2 LICENSOR hereby represents and warrants that, although it has not conducted any investigation, it has no knowledge or any patents or patent applications, other than the Patents Rights, that contain a claim that would be infringed by the sale of use of a Licensed Product, Licensed Process or Licensed Materials.

7.3 EXCEPT AS PROVIDED ABOVE, LICENSOR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL SUCH WARRANTIES, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE CONDITION OF ANY INVENTION(S) OR PRODUCT, WHETHER TANGIBLE OR INTANGIBLEE, LICENSED UNDER THIS AGREEMENT; OR THE MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE INVENTION OR PRODUCT; OR THAT THE USE OF THE LICENSED PRODUCT WILL NOT INFRINGE ANY PATENT, COPYRIGHTS, TRADEMARKS, OR OTHER RIGHTS. OTHER THAN FOR BREACH OF THE ABOVE WARRANTIES, OR ITS OWN NEGLIGENT ACTS OR OMISSIONS, LICENSOR SHALL NOT BE LIABLE FOR ANY DIRECT, CONSEQUENTIAL, OR OTHER DAMAGES SUFFERED BY ANY LICENSEE OR ANY THIRD PARTIES RESULTING FROM THE USE, PRODUCTION, MANUFACTURE, SALE, LEASE, CONSUPTION, OR ADVERTISEMENT OF THE PRODUCT.

7.4 EXCEPT EXPLICITLY PROVIDED FOR HEREIN, LICENSEE DOES NOT MAKE ANY OTHER REPRESENTATIONS OR GIVE ANY OTHER EXPLICIT OF IMPLICIT WARRANTIES. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE HEREBY DISCLAIMS ANY OTHER REPRESENTATIONS AND WARRANTIES.

7.5 The provisions of this Section shall continue beyond the termination of this Agreement.

8. ROYALTIES:

8.1 In consideration of the license herein granted, LICENSEE shall pay royalties to LICENSOR as follows:

(a) LICENSEE agrees to pay to LICENSOR all past patent fees within thirty (30) days of the Effective Date as well as any future patent fees as set out in section 5.3 of this Agreement.

(b) LICENSEE agrees to pay to LICENSOR as earned royalties a royalty calculated as a percentage of LICENSEE's Net Sales of Licensed Products which, if not for this Agreement, would infringe the Patent Rights, in accordance with the terms and conditions of this Agreement. The royalty is deemed earned as of the earlier of the date the Licensed Product and/or Licensed Process is actually sold and paid for, the date an invoice is sent y LICENSEE, or the date a Licensed Product and/or Licensed Process is transferred to a third party for any promotional reasons. The royalty shall remain fixed while this Agreement is in effect at a rate of XXXX percent (XXXX) or Net Sales.

(c) For a sublicense, LICENSEE shall pay to LICENSOR an amount equal to XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Licensee. In addition, if LICENSEE receives any fees, minimum royalties, or other payments in consideration for any rights granted under a Sublicense, and such payments are not based directly upon the amount or value of Licensed Products or Licensed Processes sold by the Sublicensee nor represent payment of costs to LICENSEE for a development program which LICENSEE is obligated to perform under such sublicense,, then LICENSEE shall pay LICENSOR XXXX percent (XXXX%) of such payments.

(d) In the event that licenses from third parties are required by LICENSEE in order to make, have made, use, sell, offer to sell or import any particular Licensed Product of Licensed Process, then

the earned royalty which LICENSEE is obligated to pay LICENSOR under this Agreement shall be reduced by XXXX ($XXXX) for each one dollar ($1.00) in royalties which Licensee is obligated to pay to third parties under such licenses, further provided, however, that the royalties payable to LICENSOR under this Section shall not be reduced to less than XXXX percent (XXXX%) of the applicable Net Sales.

(e) In the event that LICENSEE requires more than one license from the LICENSOR to make, have made for its use, sell, offer to sell or import any particular Licensed Product of Licensed Process as defined in sections 1.4 and 1.5, respectively, of this Agreement, then, the combined earned royalties shall not exceed XXXX% of Net Sales and any sublicense fees shall not exceed XXXX-percent (XXXX%) of what LICENSEE would have been required to pay to LICENSOR had LICENSEE sold the amount of Licensed Products sold by the Sublicensee.

8.2 All payments shall be made hereunder in U.S. dollars; provided however, that if the proceeds of the sales upon which such royalty payments are based are received by the LICENSEE in a foreign currency or other form that is not convertible or exportable in dollars, and the LICENSEE does not have ongoing business operations or bank accounts in the country in which the currency is not convertible or exportable, the LICENSEE shall pay such royalties in the currency of the country in which such sales were made by depositing such royalties in LICENSOR'S name in a bank designated by LICENSOR in such country. royalties in U.S. dollars shall be computed by converting the royalty in the currency of the country in which the sales were made at the exchange rate for U.S. dollars prevailing at the close of the business day of the LICENSEE;S quarter for which royalties are being calculated as published the following day in the Wall Street Journal (or, if it ceases to be published, a comparable publication to be agreed upon from time to time by the parties), and with respect to those countries for which rates are not published in the Wall Street Journal, the exchange rate fixed for such date by the appropriate United States governmental agency.

8.3 In the event the royalties set forth herein are higher than the maximum royalties permitted by the law or regulations of a particular country, the royalty payable for sales in such country shall be equal to the maximum permitted royalty under such law or regulation.

8.4 In the event that any taxes, withholding or otherwise, are levied by any taxing authority in connection with accrual or payment of any royalties payable to LICENSOR under this Agreement, the LICENSEE shall have the right to pay such taxes to the local tax authorities on behalf of LICENSOR and the payment to LICENSOR of the net amount due after reduction by the amount of such taxes, shall fully satisfy the LICENSEE'S royalty obligations under this Agreement.

9. DILIGENCE:

9.1 LICENSEE shall use efforts at least sufficient to meet the requirements of the Bayh-Dole Act to manufacture, market and sell the Licensed Products in the Territory, and to create a demand to the Products.

9.2 LICENSEE agrees to submit reports, upon LICENSOR's request but no more than every 6 months as to its efforts to develop markets for the Licensed Products. Such reports shall include assurance by LICENSEE of its intent to actively develop commercial embodiments of Licensed Products and a summary of its efforts in this regard.

9.3 Unless LICENSEE has introduced a Licensed Product into the commercial marketplace in one of the three major markets (European Union, Japan and the United States) or has made best efforts (for avoidance of doubt it will be presumed that LICENSEE has used best efforts fi it has a Licensed Product in a phase III clinical trial) to achieve the same prior to December 31, 2020. LICENSEE agrees that LICENSOR may terminate this Agreement by providing LICENSEE ninety (90) advanced written notice of tis intent to terminate this Agreement. In the event the payment of earned royalties, once begun and if any are due, ceases for more than two (2) calendar quarters, and LICENSEE fails to cure this breach within two (2) months after being provided written notice of same, LICENSOR may terminate this Agreement.

10. REPORTS AND RECORDS:

10.1 Commencing one (1) year after the first sale, the LICENSEE shall furnish to LICENSOR a report in writing specifying during the preceding calendar quarter (a) the number or amount of Licensed Products sold hereunder by LICENSEE, and/or its Affiliates or Sublicensees, (b) the total billings for all Licensed Products sold, (c) deductions as applicable in paragraph 1.6, (d) total royalties due, (e) names and addresses of all Sublicensees. Such reports shall be due within forty-five (45) days following the last day of each calendar quarter in each year during the term of this Agreement. Each such report shall be accompanied by payment in full of the amount due LICENSOR in United States dollars calculated in accordance with Section 8.1 hereof.

10.2 For a period of three (3) years from the date of each report pursuant to Paragraph 10.1, LICENSEE, shall keep records adequate to verify each such report and accompanying payment made to LICENSOR under this Agreement, and an independent certified public accountant or accounting firm selected by LICENSOR and acceptable to LICENSEE may have access, on reasonable notice during regular business hours, not to exceed once per year, to such records to verify such reports and payments. Such accountant or accounting firm shall not disclose to LICENSOR nay information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the certified public accountant or accounting firm performing such verification shall be borne by LICENSOR unless in the event that the audit reveals an underpayment of royalty by more than ten (10%) percent, the cost of the audit shall be paid by LICENSEE.

11. MARKING AND STANDARDS:

11.1 LICENSEE agrees to mark and have sublicensees mark Licensed Products (or their containers or labels) made, sold, or otherwise disposed of by it under the license granted in this Agreement with a proper patent notice as specified under the patent laws of the United States.

11.2 LICENSEE further agrees to maintain satisfactory standards in respect to the nature of the Licensed Products manufactures and/or sold by LICENSEE. LICENSEE, agrees that all Licensed Products manufactured and/or sold by it shall be of a

quality which is appropriate to products of the type here involved. LICENSEE agrees that similar provisions shall be included in sublicenses of all tiers.

12. ASSIGNMENT:

12.1 This Agreement is not assignable by LICENSEE or by operation of law without the prior written consent of LICENSOR at its sole discretion except that LICENSEE shall have the right to transfer or assign this Agreement to any entity which acquires all or substantially all of LICENSEE's assets provided that LICENSEE gives LICENSOR thirty (30) days advance written notice of the intended assignment and considers in good faith any of LICENSOR's concerns relating to the intended assignment. The foregoing sentence shall not be construed to require LICENSEE to obtain LICENSOR's approval of any Sublicensee.

12.2 This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of LICENSOR and LICENSEE.

13. NOTICE:

Any notice, payment, report or other correspondence (hereinafter collectively referred to as "correspondence") required or permitted to be given hereunder shall be mailed by certified mail or delivered by hand to the party to whom such correspondence is required or permitted to be given hereunder. If mailed, any such notice shall be deemed to have been given when mailed as evidenced by the postmark at point of mailing. If delivered by hand, any such correspondence shall be deemed to have been given when received by the party to whom such correspondence is given, as evidenced by written and dated receipt of the receiving party.

All correspondence to LICENSEE shall be addressed as follows:

Mr. Jeffrey Wolf
CEO
Heat Biologics, Inc.
Atlantic Center
119 Washington Avenue, Suite 401

Miami Beach, FL 33139

All correspondence to LICENSOR shall be addressed, in duplicate, as follows:

FOR NOTICE:

Assistant Vice President
Treasurer
327 Max Orovitz Building
1507 Levante Avenue
Coral Gables, Florida 33124-1432
Attention: Mr. Alan J. Fish

FOR NOTICE AND PAYMENT:

Office of Technology Transfer
1475 NW 12th Avenue
Sewell Building Room 2012
Miami, FL 33136

Either party may change the address to which correspondence to it is to be addressed by notification as provided herein.

14. TERMINATION:

14.1 Any party shall have the right to terminate this Agreement if the other party commits (a) a material breach of an obligation under this Agreement or (b) provides a false report, and continues in breach for more than ninety (90) days after receiving unambiguous written notice of such breach or false report; however, in the event LICENSEE breaches it obligations under Section five (5) or eight (8) above, LICENSEE shall have thirty (30) days after receiving written notice to cure such breach, after which LICENSOR shall have the right to terminate this Agreement. Such termination shall be

effective upon further written notice to the breaching party after failure by the breaching party to cure such default.

14.2 The license and rights granted in this Agreement have been granted on the basis of the special capability of LICENSEE to perform research and development work leading to the manufacture and marketing of the Products. Accordingly, LICENSEE covenants and agrees that in the event any proceedings under the Bankruptcy Act or any amendment thereto, be commenced by or against LICENSEE, and, if against LICENSEE, said proceedings shall not be dismissed with prejudice before either an adjudication in bankruptcy or the confirmation of a composition, arrangement, or plan of reorganization, or in the event LICENSEE shall be adjudged insolvent or make an assignment for the benefit or its creditors, or if a writ of attachment or execution be levied upon the license hereby created and not be released or satisfied within ten 910) days thereafter, or if a receiver be appointed in any proceeding or action to which LICENSEE is a party with authority to exercise any of the rights or privileges granted hereunder and such receiver be so discharged within a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by LICENSEE and, LICENSOR, at the election of LICENSOR, but not otherwise, ipso facto, and without notice or other action by LICENSOR, shall terminate this Agreement and all rights of LICENSEE hereunder and all rights of any and all persons claiming under LICENSEE.

14.3 LICENSEE shall have the right to terminate this Agreement by providing ninety (90) days written notice of its intent to terminate this Agreement to LICENSOR.

14.4 Any termination of this Agreement shall be without prejudice to LICENSOR's right to recover all amounts accruing to LICENSOR prior to such termination and cancellation. Except as otherwise provided, should this Agreement be terminated for any reason, LICENSEE shall have no rights, express or implied, under any patent property which is the subject matter of this Agreement, nor have the right to recover any royalties paid LICENSOR hereunder. Upon termination, LICENSEE shall have the right to dispose of LICENSED Products then in their possession and to complete existing contracts for such products, so long as contracts are completed within six (6)

months from the date of termination, subject to the payment of royalties to LICENSOR as provided in Section 8 hereof.

15. CERTIFICATE OF INSURANCE

15.1 LICENSEE shall maintain liability insurance coverage for the Product in the amount of XXXX dollars ($XXXX and at no expense to LICENSOR, LICENSEE shall name LICENSOR as an additional insured. Within fourteen (14) days of execution of this Agreement, LICENSEE shall provide a certificate of insurance to LICENSOR. LICENSEE agrees to carry and keep in force, at its expense, general liability insurance with limits not less than $XXXX per person and $XXXX aggregate to cover liability for damages on account of bodily or personal injury or death to any person, or damage to property of any person. Such insurance shall contain an endorsement naming the University of Miami as an additional insured with respect to this Agreement. Insurance Certificates should be sent to the University of Miami upon execution of this Agreement and on the anniversary of that date every year thereafter, Office of Technology Transfer, 1475 NW 12th Avenue, Sewell Building Room 2012, Miami, Florida 33136.

15.2 Licensee shall not cancel such insurance without thirty (30) days prior notice to Licensor. Such cancellation shall be cause for termination.

15.3 the terms of this provision shall extend beyond termination of the agreement.

16. USE OF NAME:

LICENSEE shall not use the name of the University of Miami, or any of its employees, or any adaptation thereof, in any publication, including advertising, promotional or sales literature without the prior written consent of Mr. Humberto Speziani, Assistant Vice President, 327 Max Orovitz Bldg., 1507 Levante Avenue, Coral Gables, FL 33124-1432. LICENSOR shall notify LICENSEE within ten (10) days of being provided notice of its decision regarding each instance of intended use of name(s) names(s). The absence of a response by LICENSOR within this ten (10) day period shall

constitute implied permission for LICENSEE to use such name in that instance. Any press releases concerning this Agreement must be mutually agreed upon by the parties.

17. GOVERNING LAW:

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Florida. Any dispute arising out of this Agreement shall be heard in a court of competent jurisdiction located in Miami-Dade County, Florida.

18. CAPTIONS:

The captions and paragraph heading of this Agreement are solely for the convenience of reference and shall not affect its interpretation.

19. SEVERABILITY:

Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in valid and enforceable manner, and the remainder of the Agreement shall remain binding upon the parties hereto.

20. SURVIVAL:

20.1 The provisions of Sections 5, 6 and 7 shall survive the termination or expiration of this Agreement and shall remain in full force and effect.

20.2 The provisions of this Agreement which do not survive termination or expiration hereof (as the case may be) shall, nonetheless, be controlling on, and shall be used in construing and interpreting, the rights and obligations of the parties hereto with regard to any dispute, controversy or claim which may arise under, out of, in connection with, or relating to this Agreement.

21. AMENDMENT:

No amendment or modification of the terms of this Agreement shall be binding on either party unless reduced to writing and signed by an authorized officer of the party to be bound.

22. WAIVER:

No failure or delay on the part of a party in exercising any right hereunder will operate as a waiver of, or impair, any such right. No single or partial exercise of any such right will preclude any other or further exercise thereof or the exercise of any other right. No waiver of any such right will be deemed a waiver of any other right hereunder.

23. CONFIDENTIALITY:

Each Party shall maintain all information of the other Party which is treated by such other Party as proprietary or confidential (referred to herein as "Confidential Information") in confidence, and shall not disclose, divulge or otherwise communicate such confidential information to others, or use it for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this Agreement, and each party hereby agrees to exercise every reasonable precaution to prevent and restrain the unauthorized disclosure of such confidential information by any of its Affiliates, directors, officer, employees, consultants, subcontractors, sublicensees or agents. LICENSEE's confidential Information includes but is not limited to the development plan, development reports and all other financial and business reports, strategies, and agreements (including sublicenses) of LICENSEE. The parties agree to keep the terms of this Agreement confidential, provided that each party may disclose this Agreement to their authorized agents and investors who are bound by similar confidentiality provisions. Notwithstanding the foregoing, Confidential Information of a party shall not include information which: (a) was lawfully known by the receiving party prior to disclosure of such information by the disclosing party to the receiving party; (b) was or becomes generally available in the public domain, without the fault of the receiving party; (c) is subsequently disclosed to the receiving party by a third party having a lawful right to make such disclosure; (d) is required by law, rule, regulation or legal process to be disclosed, provided that the receiving party making such disclosure shall take all reasonable steps to restrict and maintain to the extent possible confidentiality of such disclosure and shall provide reasonable notice to the other party to allow such party the opportunity to oppose the required disclosure; or (e) has been independently developed by employees

or others on behalf of the receiving party without access to or use of disclosing party's information as demonstrated by written record. Each party's obligations under this Section shall extend for a period of five (5) years from termination or expiration of this Agreement.

24. UNIVERSITY RULES AND REGULATIONS:

LICENSEE understands and agrees that University of Miami personnel who are engaged by LICENSEE, whether as consultants, employees or otherwise, or who possess a material financial interest in LICENSEE, are subject to the University of Miami's rule regarding outside activities and financial interests, and the University of Miami's Intellectual Property Policy. Any term or condition of an agreement between LICENSEE and such University of Miami personnel which seeks to vary or override such personnel's obligations to the University of Miami may not be enforced against such personnel, or the University of Miami, without the express written consent of an individual authorized to vary or waive such obligations on behalf of the University of Miami.

25. ENTIRE AGREEMENT:

This Agreement constitutes the entire agreement between the parties hereto respecting the subject matter hereof, and supercedes and terminates all prior agreements respecting the subject matter hereof, whether written or oral, and may be amended only by an instrument in writing executed by both parties hereto.

26. CONTRACT FORMATION AND AUTHORITY:

LICENSOR and LICENSEE each warrant and represent that the persons signing this Agreement on its behalf have authority to execute this Agreement and that the execution of this Agreement does not violate any law, rule or regulation applicable to it or any contract or other agreement by which it is bound.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

HEAT BIOLOGICS, INC.

Date: 2/18/11 By: /s/ Jeffrey Wolf

Jeffrey Wolfe
Name

CEO
Title

UNIVERSITY OF MIAMI

Date: 2/14/11 By: /s/ Humberto M. Speziani

Humberto M Speziani
Name

Assistant Vice President
Finance
Title

PROMISSORY NOTE

$250,000.00 December 14, 2011

FOR VALUE RECEIVED the undersigned (the "Company") promises to pay to the order of the NORTH CAROLINA BIOTECHNOLOGY CENTER (the "Center") the principal sum of Two Hundred Fifty Thousand Dollars ($250,000.00) (or, if less, the amount of the loan to the Company pursuant to the Loan Agreement, referenced below) with interest from the date of each principal advance made hereunder, interest to be calculated at the rate of four and one quarter percent (4.25%) per annum, compounded annually, on the unpaid balance of principal and interest until paid or until default, both principal and interest payable in lawful money of the United States of American, at the office of the North Carolina Biotechnology Center, 15 T.W. Alexander Drive, Research Triangle Park, North Carolina 27709, or at such place as the Center or its assignee hereof may designate in writing. The principal shall be due and payable in annual installments (each, a "Principal Installment") in the amount of five percent (5%) of the outstanding principal as of the date of the Principal Installment. The Principal Installments shall commence on the anniversary of the Loan Agreement referenced below, and shall continue annually on the same day of each calendar period thereafter until December 13, 2014 (the "Maturity Date"). Accrued interest, all outstanding principal, and any other amounts due hereunder and pursuant to the Loan Agreement shall be due and payable in full on the Maturity Date.

Unless otherwise provided, this Promissory Note (this "Note") may be prepaid in full or in part at any time without penalty or premium. The Center does not intend to charge and the Company shall not be required to pay any amount of interest or other fees or charges in excess of the maximum permitted by applicable law.

This Note is given pursuant to Loan Agreement #2012-SGL-2701 dated December 13, 2011, between the Company and the Center.

The occurrence of any one or more of the events defined as "Events of Default" in the above-referenced Loan Agreement shall constitute a default under this Note. Whenever such a default occurs, the entire balance outstanding hereunder and all other obligations of the Company to the Center (however acquired or evidenced) shall, at the option of the Center, become forthwith due and payable, without presentment, notice, protest or demand of any kind for the payment of the whole or any part hereof (all of which are expressly waived by the Company). In the event any installment or portion thereof is not paid in a timely fashion, subsequent payments will be applied first to the past due balance, specifically to the oldest maturing installment.

Upon default, the Center may employ an attorney to enforce the Center's rights and remedies, and the Company hereby agrees to pay to the Center reasonable attorneys' fee not exceeding a sum equal to fifteen percent (15%) of the outstanding balance owing on said Note, plus all other reasonable expenses incurred by the Center in exercising any of the Center's rights and remedies upon default. Also, upon default, the unpaid principal, accrued interest, and all other

Sums due under this Note, if any, shall bear interest at the rate shown in the first paragraph of this Note, or the maximum rate permitted by law, whichever is lower. The rights and remedies of the Center as provided herein shall be cumulative and may be pursued singly, successively, or together against the property described in the Loan Agreement, or any Security Agreement made by the Company in favor of the Center, for payment or security, in the sole discretion of the Center. The failure to exercise any such right or remedy shall not be a waiver or release of such rights or remedies or the right to exercise any of them at another time.

This Note is governed and construed in accordance with the laws of the State of North Carolina, excepting only its conflict of law principles. In the event any one or more of the provisions of this Note shall for any reason be held to be invalid, illegal or unenforceable, in whole or in part, in any respect, or in the event any one or more of the provisions of this Note would operate or would prospectively operate to invalidate this Note, then and in those events, such provision(s) only shall be deemed null and void and shall not affect any other provision of this Note, and the remain provisions of this Note shall remain operative and in full force and effect and in no way shall be affected, prejudiced or disturbed thereby.

Signed, sealed and delivered on the day and year first above written.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf
Printed Name: Jeffrey Wolf
Title: CEO

(Notary block appears on the following page.)

STATE OF NORTH CAROLINA

COUNTY OF Wake

I, Lisa Gillon, a Notary Public of Wake County, State of North Carolina do hereby certify that Jeffrey Wolf, (the "Signatory"), CEO [insert title of Signatory] of Heat Biologics, a _____ corporation, personally appeared before me this day and by authority duly given, acknowledged the due execution of the foregoing instrument on behalf of the corporation.

I certify that the Signatory personally appeared before me this day, and

(Check one of the following and mark through all blank lines or space in this certificate)

☑ I have personal knowledge of the identity of the Signatory; or
☐ I have seen satisfactory evidence of the Signatory's identity, by a current state or federal identification with the Signatory's photograph in the form of:

(check one of the following)

☐ a driver's license; or
☐ in the form of _____; or
☐ a credible witness has sworn to the identity of the Signatory.

The Signatory acknowledged to me that he/she voluntarily signed the foregoing instrument for the purpose stated therein and in the capacity indicated.

Witness my hand and official stamp or seal this 20th day of December 2011.

/s/ Lisa Gillon
Notary Public

[Notary Seal of Lisa Gillon]

Print Name: Lisa Gillon
[Note: Notary Public must sign exactly as on notary seal]

My Commission Expires: 9/28/13

☜ [NOTARY SEAL] (MUST BE FULLY LEGIBLE)

EXHIBIT 10.7

LOAN AGREEMENT

THIS LOAN AGREEMENT (the "**Agreement"**) is made as of the 14th day of December 2011 by and between HEAT BIOLOGICS INC (the "Company") and the NORTH CAROLINA BIOTECHNOLOGY CENTER (the "**Center**").

PREAMBLE

(A) The Center is organized for the purpose of coordinating and stimulating research in biotechnology among the public and private sectors in North Carolina and encouraging the development of the biotechnology industry in North Carolina. In its effort to stimulate biotechnology research and encourage the development of the biotechnology industry, the Center, among other things, provides loans to private entities for the purpose of engaging in research and/or certain business development projects.

(B) The Center typically provides these loans to early stage biotechnology companies across the state to support company inception, research and growth. Funds from sources other than the center are required to finance any commercialization results from a funded project. Funds loaned by the center may not be used for payment of overhead expenses (including without limitation, utilities, insurance, taxes, and office supplies).

(C) As a publicly funded entity, the Center is held accountable for the uses of funds loaned by the Center. Consequently, the company must provide sufficient information in reports to the Center to evaluate the progress of projects the Center is funding, including the achievement of specified milestones.

(D) The Company has applied to the Center for a loan to fund the type of project described in Paragraph 1 below and the Center has determined that providing a loan to the Company furthers the Center's purposes.

NOW THEREFORE, in consideration of the mutual promises and such other valuable consideration as set forth below, the parties agree to the following terms and conditions:

1. **Scope of Project.**

(a) The Company shall develop, perform and complete the work described in a proposal entitled "Heat Biologics, Inc – ImPACT" as approved by the Center and being more fully set out in Exhibit A attached to the Agreement (the "Project"). The period of performance of the project shall begin on December 14th, 2011 and end on December 14th, 2012. The Company will undertake the projects as described inExhibit A except that if there is any conflict between the terms ofExhibit A and the terms of this Agreement, the terms of this Agreement shall control. The Company shall obtain prior written approval from the Center of any change in the personnel, management or scope of the project described in Exhibit A.

(b) For the purposes of this Agreement, the Company constitutes a non-State entity (as defined in Section 143C-1-1 of the North Carolina General Statutes) that receives State funds as a loan from the Center, and is thereby defined as a "**Subgrantee**" pursuant to Section 143C-6-23 of the North Carolina General Statutes. The Company shall not take any action including the transfer of funds in such a manner that a Sub- Subgrantee would be created pursuant to the project. For the purposes of this Agreement, **"Sub-Subgrantee"** means a non- State entity (as defined in Section 143C-1-1 of the North Carolina General Statutes) that receives State funds as a**"Grant"** means financial assistance provided by the Company to carry put activities whereby the Company anticipates no programmatic involvement with the Sub-Subgrantee during the performance of the Grant. A Grant does not include compensation as consideration for goods or services.

2. Commitment and Loan.

(a) The aggregate principal amount of the Center's commitment to lend money to the Company is **$250,000.00** (the "**Loan"**). The Center may use a combination of its funds and funds appropriated by the State of North Carolina to make this Loan. The center shall, upon the terms, subject to the conditions, and in reliance on the accordance with paragraph 4 below and the **"Budget"** as attached hereto in Exhibit B. the Company promises the repay all amounts loaned hereunder (the **"Principal")** plus interest on the unpaid Principal balance at the compounded annual rate of 4.25%, to be repaid in annual installments (each, a **"Principal Installment"**) in the amount of five percent (5%) of the outstanding principals as of the date of the principal Installment, with Principal Installments commencing on the anniversary of this Agreement and continuing annually on the same day of each calendar period thereafter with one final payment of all remaining Principal, accrued interest, and any other amounts due hereunder on December 14th, 2014, as set forth the promissory note (the "**Note**") dated as of the date of this Agreement made by the Company in favor of the Center. The Center shall deduct all expenses described in paragraph 2(b) below from the Final Loan Portion, as defined in Paragraph 4 below, but in the event such expenses exceed such amount, the Company shall continue to be obligated to pay such expense. If applicable, the Company shall also provide the Center with stock or unit warrant(s), as applicable, (the "**Warrant**"), which Warrant(s) shall be issued to the Center in connection with the execution of this Agreement.

(b) The Company shall (i) pay all reasonable fees, expenses and costs (including attorneys' fees) incurred by the Center in connection with the preparation, execution, delivery, administration of, and operations under, all documents pertaining to the Loan and in connection with any amendment, modification, review or wavier there of (whether or not executed) and the enforcement of any rights thereunder, including without limitations under the Note, or the defense of any claim arising out or in any way related to or connected with the documents, including without limitation the Note, and (ii) indemnify the Center against all taxes (excluding income taxes) and recording and filing fees pertaining to the Loan, including without limitation the Note and the filing, continuation, amendment and termination of liens on the Collateral (as defined in Paragraph 6 below).

3. **Representation and Warranties**. The Company hereby represents and warrants that:

(a) The Company is duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is incorporated or organized and is duly qualified and is in good standing as a foreign business entity in those jurisdictions where the conduct of its business or ownership of its property requires qualification and has the power to carry out the business in which it is engaged. The execution and delivery of this Agreement and any related documents (including but not limited to the Note and the Warrant, if applicable) have been duly authorized by all necessary action of the board of directors and shareholders, managers and members, or partners, as applicable, of the Company under applicable law, and are not and will not be in contravention of any provision of law, nor in contravention of the articles of incorporation, articles of organization, any certificate of authority, bylaw or other applicable organizational document of the Company, nor result in the branch of any agreement, indenture, or undertaking to which the Company is a party or by which it is bound.

(b) The Company has provided the Center prior to the execution of this Agreement all the Company's material contracts to which the Company is a party, pursuant to which the Company has any continuing obligation, or which otherwise remain in full force and effect, and which fall into any of the following categories (each such contract, a "**Material Contract")**: (i) contracts with an aggregate consideration payable by or to the Company equal to at least $100,000 or (ii) contracts otherwise material to the business, condition (financial or otherwise), operations, performance, properties or prospects of the Company. Exhibit C sets forth a list, as of the date of this Agreement, of all the Company's Material Contracts.

(c) The Company has no Debt (defined below) existing on the effective date of this Agreement other than that listed on Exhibit D. for purpose of this Agreement, "**Debt"** means with respect to the Company (i) all indebtedness of the Company for borrowed money; (ii) all obligations of the Company issued, undertaken or assumed as the deferred purchase price of property of services (other than trade payables entered into in the ordinary course of business on ordinary terms, accrued expenses (including deferred compensation) and similar ordinary course items); (iii) all obligations (contingent or otherwise) of the Company under letters of credit and all outstanding non-contingent reimbursement or payment obligations of the Company; (iv) all obligations of the Company evidenced by notes, bonds, debentures or other similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (v) all indebtedness of the Company created or arising under any conditional sale or other title retention agreement, or incurred as financing, in other case with respect to property acquired by the Company (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property); (vi) all obligations of the Company to purchase, redeem, retire, defease or otherwise make any payments in respect of any Equity interests (defined below) in the Company or any other person or entity or any other warrants, rights or options of acquire such

Equity Interests, value, in the case of redeemable preferred interest, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends; (vii) all indebtedness referred to in clauses (i) through (vi) above secured by (or for which the holder of such Debt has an existing right, contingent or otherwise, to be secured by) any lien upon or in property (including accounts and contact rights) owned by the Company, even though the Company has not assumed or become liable for the payment of such Debt; and (viii) all guarantee obligations contingent or otherwise, of any person or entity guaranteeing or having the effect of guaranteeing any indebtedness or obligations of others of the kinds referred to in clauses (i) through (vii) above. For purposes of this Agreement, "**Equity Interests**" means (i) in the case of a corporation, its capital stock, (ii) in the case of a partnership, its partnership interests (whether general or limited), (iii) in the case of a limited liability company, its membership interests, (iv) in the case of an association or other entity, any shares, interest, participations, rights or other equivalents (however designated) of its capital stock or other equity interests, and (v) any other interest or participation that confers on a person or entity the right to receive a share of the profits and losses of, or distributions or assets of, the issuing person or entity.

(d) The Company maintains a significant operating presence in the State of North Carolina, is duly qualified to conduct business and in good standing in the State of North Carolina, and has executed and filed all forms necessary to be so qualified with the North Carolina Secretary of State.

(e) There is no action, suit, proceeding, or investigation at law or in equity pending before any court, public board or body, or to the Company's knowledge, threatened against or affecting it, that could or might adversely affect the Project, or patent, trademark, or other intellectual property rights of the Company, or any of the transactions contemplated by this Agreement or the validity or enforceability of this Agreement, or the Company's ability to discharge its obligations under this Agreement.

(f) The Company is not infringing or violating any patent, copyright, trademark, or other intellectual property.

(g) No consent or approval is necessary from any governmental authority as a condition to the execution and delivery of this Agreement by the Company or the performance of any of its obligations hereunder, or to the extent applicable, all such governmental consents or approvals have been obtained. The Company shall provide the Center with evidence of the existence of any such consents or approvals at the time of the execution of this Agreement.

(h) The Company is solvent as determined under the United States Bankruptcy Code as amended.

4. Procedure for Advances.

(a) Subject to the terms of this Agreement, the Center shall advance the Loan in three (3) installments of fifty percent (50%), forty percent (40%) and ten percent

(10%), respectively. The Center shall make the first advance of fifty percent (50%) of the Loan to the Company after execution and delivery by the Company of this Agreement and any other document or certificate required herein at closing. The second advance of forty percent (40%) of the Loan will be advanced upon: (i) submission of a Mid-Term Report (described in Paragraph 10 below) as required under this Agreement (in a form satisfactory to the Center in its sole discretion) and any revised timeline or disbursement schedule, if applicable, which schedule is included in the Budget as reflected in Exhibit B, and (ii) approval by the Center, in its sole discretion, that the Company has achieved designated millstones pertaining to the Project as set forth in Exhibit A. Upon completion of the Project and the Company providing the Final Report (described in Paragraph 10) in a form satisfactory to the Center in the Center's sole discretion, the Center shall disburse the third advance of the remaining ten percent (10%) of the Loan (the "**Final Loan Portion**"), subject to deductions as described in Paragraphs 2(a) and 2(b).

(b) In the event: (i) the Company fails to achieve the Project tasks or the designated milestones in a timely manner, (ii) the original intent of the Project is unattainable (iii) the Company is otherwise in default hereunder, or (iv) the Company submits a Mid-Term Report of Final Report that is unsatisfactory to the Center, in each case as determined by the Center in its sole discretion, the Company agrees that the Center has the right (x) to withheld release of any remaining or unused Loan amounts or advances, (y) to require the return of any amounts previously disbursed here under which remain unspent and in the possession and/or control of the Company, and/or (z) to deem the Company in default of this Agreement and subject to the remedies in Section 16(b) below. Without limiting the foregoing, the Center shall not be obligated to disburse any remaining or unused Loan amounts or advances if the Company's request for such disbursement occurs more than one (1) year from the date of this Agreement, regardless of the cause for such failure.

5. Covenants.

(a) The Company agrees that all sums advanced under this Loan shall be utilized exclusively for the purposes of the Project.

(b) The Company agrees that at all times during the term of this Agreement and until the Principal and all interest on the Loan is repaid in full, it shall maintain a significant operational presence in the State of North Carolina (as shall be determined by the Center in its sole discretion), it being understood that a purpose for providing this Loan is to encourage biotechnology research and development in North Carolina.

(c) The Company shall use its best efforts to ensure that all intellectual property and proprietary rights including, but not limited to, trademarks, trade names, patents, processes, designs, formulas, trade secrets, know-how and other confidential information which is developed, purchased or licensed pursuant to the Project will be properly owned by or assigned to the Company (particularly in the case of patents) from individual inventors, developers, or owners and registered, filed, issued, or protected in the respective offices and jurisdictions in which such registration, filing, issuance, or protection

is necessary to protect the rights therein of the Company for the conduct of its business and the marketing of its products at present and for the reasonably foreseeable future.

(d) The Company shall at all times preserve it legal existence.

(e) The Company shall provide the Center thirty (30) days written notice prior to the effective date of any of the following events, and upon the date of closing of such event the outstanding Principal and any accrued interest shall be immediately due and payable to the Center and this Agreement may be terminated by the Center; (i) the Company sells, leases transfers or otherwise disposes of all or substantially all of its assets now owned or hereafter acquired, (ii) the Company makes a public offering of the Company's capital stock or equity interests or (iii) the Company takes any action which would result in a change in the direct or indirect control of fifty percent (50%) or more of the capital stock or equity interest ownership (including, without limitation, sale of equity, merger, reorganization or consolidation) of the Company from the form of direct or indirect ownership or control (as the case may be) which exists as of the date of this Agreement, or (iv) the Company receives additional equity investments and/or incurs Debt and/or receives milestone payments or license fees totaling $2,500,000, in the aggregate, over any 12 month period beginning on or after January 1, 2013. For purposes of this Paragraph 5© the term "**public offering**" shall mean sale of the Company's capital stock in a firm commitment, underwritten public offering registered under the Securities Act of 1933, as amended (other than a registration relating solely to a transaction under Rule 145 under such Act or any successor thereto). In furtherance of this covenant, the Company agrees to provide the Center with thirty (30) days written notice prior to the effective date of any change of direct or indirect ownership of any capital stock or equity interest in the Company.

(f) The Company shall provide the Center thirty (30) days written notice prior to the Company changing its name or any name in which it does business.

(g) The Company shall maintain, with financially sound and reputable insurance companies, insurance of the kinds, covering the risks and in the amounts usually carried by companies engaged I a business similar to that of the Company. The Company shall also exhibit or deliver such policies of insurance to the Center upon request by the Center. As its interest may appear, the Center shall have the right to settle and compromise any and all claims under any insurance policy required to be maintained by the Company hereunder, and the Company hereby appoints the Center as its attorney-in-fact with power to demand, receive, and receipt for all moneys payable thereunder, to execute in the name of the Company or the Center or both any proof of loss, notice, draft, or other instruments in connection with such policies or any loss thereunder and generally to do and perform any and all acts which the Company, but for this appointment, might or could perform.

(h) For purposes of this Agreement, "**Additional Debt**" means all Debt other than: (i) the Loan, (ii) Debt existing on the effective date of this Agreement and listed on Exhibit D (and any extension renewal or refinancing thereof so long as the principal

amount thereof shall not be increases), and (iii) purchase money financing solely for the purchase of equipment and secured solely by said equipment. In the event the Company wishes to incur Additional Debt over $100,000 in the aggregate that is on par with or superior in priority to the Loan, the Company shall, within (30) days of closing such Additional Debt, repay a portion of the outstanding Loan balance equal to ten percent (10%) of the amount of such Additional Debt.

6. **Security**. The Loan may be secured through the execution of instruments appropriate to permit the Center to assert a first lien on goods (including, but not limited to, equipment) and general intangibles purchased with the Loan (collectively the "**Collateral**"). The Company agrees to notify the Center in writing prior to the purchase of any such Collateral and, upon notice from the Center, shall simultaneously with such purchase, convey to the Center a purchase money security interest of first position to ensure compliance with its obligations herein, as well as to cooperate in the execution and perfection of all instruments necessary therefore. The Company agrees not to take title to or receive delivery of any collateral until such security interest documents are executed and filings are filed in order to give the Center a perfected first lien or security interest to such Collateral. The Company agrees to advance to the Center funds sufficient to cover filing costs as established by applicable law. In the event the Company does not advance such funds, they shall be deducted from the Final Loan Portion in accordance with Paragraphs 2(a) and 2(b). The Company agrees that it will not dispose of any Collateral without the prior written consent of the Center.

7. **Independent Status of the Company**. Neither this Agreement nor any provisions hereof shall be deemed to create a partnership or joint venture between the Center and the Company, and the relationship of the parties is strictly that of a borrower and lender. The Company specifically agrees that it shall not represent itself as an agent or employee of the Center, not is this Agreement intended to be construed so as to make the Company as agent or employee of the Center. The Company shall not have the ability to bind the Center to any agreement nor shall it represent to any person that it has such ability. The Company shall be responsible for payment of all its expenses, including, but not limited to rent, office expenses and all forms of compensation to its employees. Te Company shall provide worker's compensation insurance to the extent required for its operations and shall accept full responsibility for payments of unemployment compensation, social security, income taxes, and any other charges, taxes or payroll deductions required by law in connection with its operations, for itself and its employees.

8. **Amendment**. Any and all additions, deletions or other changes in the Agreement shall be effected by written amendment signed by the parties to this Agreement.

9. **Budget Changes and Extensions of Time.**

(a) All requests for a Budge change or extension of time for Project completion must be made in writing in advance of the anticipated change and be signed by the principal investigator and authorized Company official. All such requests must be

received by the Center at least thirty (30) days prior to the proposed effective date of such change or extension.

(b) Any Budget change that adds or deletes a category, or any change that exceeds the originally approved Budge allocation by ten percent (10%) or $500, whichever is greater, requires the prior written approval of the Center in its sole discretion. Requests for Budge changes should be submitted on the Center's "Request for Budge change" form, as may be used from time to time. No more than two Budget change request will be considered during a twelve (12) month period.

(c) If an extension for time for six (6) months or more is requested, a project status report and financial status report must be provided to the Center and be approved by the Center in its sole discretion. These reports should describe accomplishments and progress of the Project made to date, summarize expenditures by Budge category, and cite the reasons for requesting a change.

10. Reports and Site Visits.

(a) Mid-Term Report. The Company shall submit a mid-term report on the progress of the Project. Reports are due six (6) months following execution of this Agreement or earlier if the Project is shorter term Such reports should be from two to three pages in length and should include a separate financial repot which provides a breakdown of expenditures incurred during the reporting period according to the approved budget.

(b) Final Report. The Company agrees that within ninety (90) days after completion of the Project, a "Final Report" shall be submitted to the Center which describes the activities and accomplishments of the Project. The Company shall also include in the Final Report a final financial status report which summarized the expenditure of the Center funds by category (i.e., salaries, materials, equipment, etc.), and report the source and amount of all other funds used to support the Project.

(c) Annual Financial Statements. The Company agrees that during the term of this Agreement and until the Principal and all interest on the Loan is repaid in full, it shall submit to the Center, annually, a copy of the Company's financial statements, whether audited or unaudited, including the Company's balance sheet, income statement, and net statement of cash flow, within sixty (60) days after the Company's fiscal year end.

(d) Other Reports. The Center may request from the Company certain records or other information which will assist the Center with evaluation of the short and long-range impact of its programs. The Company recognized that such request may occur after completion of the Project and agrees to provide such information to the Center.

(e) Content of Reports. In the event information is provided in the reports and other information described in this Paragraph 10 that constitutes trade secrets or

confidential and proprietary information, such as chemical structures, processes or formulations, the Company shall cause such information to be marked "Confidential" as specified in Paragraph 15 below. Without limiting any other requirement of this Agreement, the Company shall provide the Center with any information required for the Center's reporting purposes (in a prompt and timely manner), including without limitation, the Company's audited or unaudited financial statements and tax returns.

(f) Site Visits. Site visits by the Center staff may be made as necessary. The Company shall be given at least twenty-four hours advance notice of any site visit, which will be scheduled during regular business hours unless other, mutually acceptable, arrangements are agreed upon.

11. Project Records.

(a) The Company shall maintain full, accurate and verifiable financial records, supporting documents, and all other pertinent data for this Project in such a manner as to clearly identify and document the expenditure of the Loan provided under this Agreement separate from accounts for other awards, monetary contributions, or other revenue sources for the Project (the "**Project Records**").

(b) The Company shall retain all Project Records for a period of five (5) years from the date of termination of this Agreement. In the event the Project Records are audited, all Project Records shall be retained beyond the five-year period until any and all audit findings have been resolved.

(c) The Company agrees to make available to the Center all of its Project Records, and agrees to allow the Center to audit, examine and copy the Project Records.

12. Audit Requirements and Reporting. The Company shall use or expend the funds provided by this Agreement only for the purposes for which they were granted, and it subject to the requirements of N.C. Gen. Stat. §§ 143C-6.21, -6.22, and -6.23 or the corresponding provisions(s) of any future amendments or successor provisions. The Company shall comply with all the rules and reporting requirements established by statute or administrative rules. By way of example, the reporting thresholds and formats established for grantees receiving State funds as of February 2011 are attached as Exhibit E. The Company acknowledged that the Company constitutes a "grantee" for purposed of the thresholds and requirements set forth in Exhibit E. Such thresholds and requirements may change from time to time and the Company should review the applicable state statutes and regulations to determine the then applicable thresholds. In conjunction with the reporting requirements imposed by the State as described in Exhibit E, the Company agrees that the Center has independent audit rights as set forth in Paragraphs 10 and 11 above.

13. Patents. The Company agrees that any patents, or patent rights, or nay patentable inventions developed as a result of this Agreement shall e promptly reported to the Center.

14. Public Statements and Publications.

(a) The Company may publish or arrange for the publication of scientific and technical information resulting from the Project, and is free to copyright any books, publications, films, or other copyrightable materials developed in the course of or resulting therefrom.

(b) Regardless of whether material is copyrighted, any publication of scientific or technical information resulting from work carried out under or related to the Project must contain the following acknowledgment and disclaimer statement:

"This material is based upon work supported in whole or part by the North Carolina Biotechnology Center."

All materials, except scientific articles or papers published in scientific journals must also contain the following statement:

"Any opinions, finding, conclusions, or recommendations express In this publication are those of the author(s) and do not necessarily reflect the views and policies of the North Carolina Biotechnology Center."

(c) In the event of: (i) any public statements by the Company concerting the Project (including related products or intellectual property developments), or (ii) any public meeting or presentation I which the Company is involved or in which it makes any statement regarding the Company's previous or proposed financing, the Company shall state in conjunction with such meeting, presentation or statements that:

"Funding to the Company was provided by the North Carolina Biotechnology Center, an entity primarily funded by the State of North Carolina."

15. Disclosure of information. In the event the Company provides trade secrets or confidential proprietary information to the Center, then the Center shall exert its best efforts to protect the confidentiality of the technical, scientific or financial information considered proprietary, so long as each page or section f any report, correspondence, or document containing such information is identified as follows:

"CONFIDENTIAL: date "

The use of brackets ("[.]") to set off such language is recommended. Information which is not, in fact, proprietary should not be identified in this manner.

For a period of three (3) years from the effective date of this Agreement, the Center shall not intentionally disclose any information designated as CONFIDENTIAL to third parties except for (a) disclosures of information that was publicly available, (b) disclosures required to be made under the provisions of any North Carolina or United States law, statute or regulation (c) disclosures of information that was known by the Center prior to its disclosure by the Company or information that is received from a third party at any time, (d) disclosures made in connection with the Center's funding review and approval process, (e) disclosures required to be made by rule or order of any court of competent jurisdiction, or (f) any other inadvertent, unintentional, unknowing, or immaterial disclosure. The Company releases and shall hold the Center harmless with respect to disclosures made pursuant to the proceeding sentence.

16. Events of Default and Remedies.

(a) Each of the following shall constitute an "Event of Default" by the Company under this Agreement, whatever the reason for such Event of Default and whether it shall be voluntary or involuntary, or be affected by operation of law or otherwise: (i) any payment of Principal, interest or fee on the Loa, or any other amount due hereunder is not made when due; (ii) any provision, covenant or agreement of the Company is this Agreement, the Note or any related document is breached in any respect (including, but not limited to, the Company's covenant to maintain a significant operational presence in the State of North Carolina); (iii) any warranty, representation or statement made or furnished to the Center of the Company is this Agreement, the Note, or in any related document is untrue or misleading in any material respect; (iv) any material default occurs under any agreement with a financial institution or lender in which the Company is a party and such default is not corrected within the period, if any, provided in such agreement; (v) any voluntary or involuntary bankruptcy, reorganization, insolvency, arrangement, receivership, or similar proceeding is commenced by or against the Company under any federal or state law, or the Company makes any assignment for the benefit of creditors; (vi) the sale, assignment, pledge, hypothecation, mortgage or transfer of all or a substantial portion of the assets of the Company; or (viii) any substantial part of the inventory, equipment or other property of the Company, real or personal tangible or intangible, is damaged or destroyed and the damage or destruction is not covered by collectible insurance.

(b) Upon the occurrence of any Event of Default, and in every such event, the Center, upon notice to the Company, may declare the Principal, all accrued interest, and fees on the Loan (as reflected in the Note) and other amounts payable under this Agreement to be, and the Loan and Note and all such other amounts shall thereupon become, due and payable to the Center, without presentment, demand, protest or other notice of any kind, all of which are expressly waived, anything in this Agreement or the Note to the contrary notwithstanding. In addition to the foregoing, the Center shall be entitled to recover reasonable attorneys' fees, costs and legal expenses expended to enforce the Center's rights under this Agreement, and the Center shall have all the rights and remedies of a secured

party under North Carolina law. No remedy herein conferred upon or reserved to the Center in intended to be exclusive of any other remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under this agreement or now hereafter existing in law or equity. No failure or delay by the Center in exercising any right shall operate as a waiver of it, not shall any single or partial exercise of any power or right preclude its other or further exercise of any power or right.

17. **Liabilities and Loss**. The Center assumes no liability with respect to accidents, bodily injury, illness, breach of contract or any other damages or loss, or with respect to any claims or losses arising out of any activities undertaken by the Company under this Agreement or the Project, whether with respect to persons or property of the Company, or third parties. Further, the Company agrees to indemnify, defend and save harmless the Center and its officers, agents and employees against any and all liabilities, obligations, losses , expenses (including reasonable attorneys' fees), costs or claims arising from or related to the Company's performance or failure to perform under this Agreement or the Project, including, but not limited to, violation of any proprietary right or right of privacy arising out of the publication, translation, reproduction, delivery, performance, use or disposition of any information published resulting from the work of the Project or based on any libelous or other improper matter contained in such information.

18. **Availability of Funds**. It is understood that the Center's obligation to make available any portion of the Loan (and any ability to make advances of the Loan) under this agreement is contingent upon the availability and continuation of funds provided to the Center for such purpose. The Center depends upon sources for funding which are beyond its control. Notwithstanding any other provision of this Agreement, in the event that total funding support of the Center falls below the level available to the Center at the time the Center's commitment to make the Loan was made, the Center may terminate its commitment to make the Loan (and any further advanced hereof) and this Agreement upon thirty (30) days written notice to the Company.

19. **Headings**. The Headings in this Agreement are for purposes of reference only and shall not limit or otherwise affect the meaning hereof.

20. **Notice**. All notices and other communications required or permitted hereunder shall be in writing and shall be (i) personally delivered, (ii) sent by facsimile (with a copy sent the same day by certified mail, postage prepaid), or (iii) sent Federal Express or other nationally recognized overnight delivery service, address as follows:

If to the Center, to: Contracts and Grants
North Carolina Biotechnology Center
15 T. W. Alexander Drive
P.O. Box 13547
Research Triangle Park, NC 27709-3547
Facsimile: (919) 549-8812

If to the Company, to: Heat Biologics, Inc.

15 T.W. Alexander Drive
Suite 119
Research Triangle Park, NC 27709
Facsimile: (919) _____

or addressed to such other address or to the attention of such other individual as the Center or the Company shall have specified in a notice delivered pursuant to this Paragraph 20. Notice shall be deemed effective on the date dispatched if by personal delivery, on the date transmitted by facsimile (if confirmed by mail pursuant to this Paragraph 20) or two (2) days after mailing if the Federal Express or other nationally recognized overnight delivery service.

21. **Execution**. The Agreement may be executed in one or more counterparts, each of which, when executed, shall be deemed an original, and such counterparts, together, shall constitute one and the same Agreement which shall be sufficiently evidence by one or such original counterparts.

22. **Construction**. This Agreement shall be construed and governed by the laws of the State of North Carolina, excepting only its conflict of law principles.

23. **Benefit and Assignment**. The rights, duties and obligations of the parties under this Agreement shall inure to the benefit of the parties and shall be binding upon their successors and permitted assigns. Neither this Agreement nor the respective rights, duties, obligations, and responsibilities of the Company may be transferred or assigned, in whole or in part, by the Company to any other person, firm or organization (including sub-agents) without the prior written consent of the Center. In the event of an assignment, the Company is not relieved of any of the duties and responsibilities of this Agreement, and the assignee must agree to abide by the standards contained in Title 09, Subchapter 3M of the North Carolina Administrative Code.

24. **Survival**. All representations and warranties made by the Company herein shall survive delivery of the Note and the making of the Loan hereunder.

25. **Termination.**

(a) Notwithstanding any other provision of this Agreement, the parties my terminate this Agreement by mutual consent with sixty (60) days written notice to the other party. The foregoing termination right is in addition to the Center's other termination rights set forth in this Agreement.

(b) All obligations of the Center to advance funds under this Agreement shall cease as of the date of any termination, and the Company agrees that, as a result of any such termination, the Center shall not be liable to the Company for any compensating, losses, damages, or reimbursement of any kind. The obligations of the Company to repay the Principal, and all accrued interest and any other fees, with respect to the Loan and any other obligations of the Company that by their terms survive termination of this Agreement

(including without limitation, those obligations set forth in Paragraphs 5 and 10-17) shall survive any termination of this Agreement.

26. **Severability of Provisions**. Any provision of the Agreement which is prohibited or unenforceable in any manner, in any jurisdiction, shall as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions here of or affecting the validity or enforceability of such provision I any other jurisdiction.

27. **Entire Agreement**. The Exhibits to this Agreement are hereby incorporated into this Agreement by reference. This Agreement, the Note, the Warrant, if applicable, and any related documents (including a security agreement and financing statements as applicable) supersede all prior discussions and/or agreements between the Center and the Company, and expresses their entire understanding with respect to the subject matter hereof, and shall not be amended, modified or altered, nor any of their provisions waived, except as set forth in Paragraph 8 above.

[The remainder of this page was intentionally left blank; signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

HEAT BIOLOGICS, INC.

By: /s/ Jeff Wolf

Printed Name: Jeff Wolf

Title: CEO

Company Tax I.D. No: 262844103

NORTH CAROLINA BIOTECHNOLOGY CENTER

By: /s/ Kenneth R. Tindall
Kenneth R. Tindall, PhD
Senior Vice President for
Science and Business Development

(The notary block for the Company's signature appears on the next page.)

STATE OF NORTH CAROLINA

COUNTY OF Wake

I, Lisa Gillon, a Notary Public of Wake County, State of North Carolina do hereby certify that Jeffery Wolf, (the "**Signatory**"), CEO [*Insert title of Signatory*] of Heat Biologics, a _____ corporation, personally appeared before me this day and by authority duly given, acknowledged the due execution of the foregoing instrument on behalf of the corporation.

I certify that the Signatory personally appeared before me this day, and

(*Check on of the following and mark through all blank lines or space in this certificate*)

☑ I have personal knowledge of the identity of the Signatory; or
☐ I have seen satisfactory evidence of the Signatory's identity, by a current state or federal identification with the Signatory's photograph in the form of:

(check one of the following)
☐ A driver's license; or
☐ In the form of _____; or
☐ A credible witness has sworn to the identity of the Signatory.

The Signatory acknowledged to me that he/she voluntarily signed the foregoing instrument for the purpose stated therein and in the capacity indicated.

Witness my hand and official stamp or seal this 20th day of December, 2011.

/s/ Lisa Gillon
Notary Public

Print Name: Lisa Gillon
[Note: Notary Public must sign exactly as on notary seal]

[NOTARY SEAL STAMP]

My Commission Expires: 9/28/13

☜ [NOTARY SEAL] (MUST BE FULLY LEGIBLE)

EXHIBIT A

PROJECT DESCRIPTION

Cover Sheet: STRATEGIC GROWTH LOAN

FULL TEXT AVAILABLE UPON REQUEST

2012-SGL·2701

Title: Heat Biologics. Inc.

Request Amount: $250.000.00

Project Director: Mr. Jeffrey Wolf. CEO

Organization: Heat Biologics, Inc.

15 T.W. Alexander Drive
Suite 119
Research Triangle Park, NC 27709

County: Durham

Phone: 919-314-8323

Email: jwolf@heatbio.com

PUBLIC INFORMATION SUMMARY

Heat Biologics is developing it proprietary “ImPACT” (Immune Pan-Antigen Cytotoxic Therapy) off-the-shelf therapeutic vaccines for oncology and antiviral applications. ImPACT uses engineered cancer cell lines to produce an immune-stimulatory protein called gp96-Ig along with chaperoned cellular antigens to stimulate the immune system to issue a pan-antigen cytotoxic attack against cancer or virus-infected cells. The company’s lead program is entering Phase 2 clinical trials against non-small lung cancer in October. Heat also has bladder cancer and ovarian concern programs planned to begin clinical trials in early 2012 and grant-funded HIV program in advanced primate studies.

EXHIBIT B

BUDGET

North Carolina
Biotechnology Center

Business and Technology Development
Detailed Budget

Project Title:	
Immune Pan-Antigen Cytotoxic (ImPACT) for Bladder Cancer	
Company:	Project Length (In months):
Heat Biologics	12

NCBC Award Program (check only one):	
Technology Enhancement Grant (TEG)	
Company Inception Loan (CIL)	
SBIR Bridge Loan (RBL)	
Small Business Research Loan (SRL)	
Strategic Growth Loan (SGL)	X

Date Submitted: _____

PERSONNEL The maximum annual salary may be capped in accordance with Federal Government guidelines

Name	Title/Role	Annual Salary	Annual Benefits	% earn on project	Amount requested from NCBC	Amount provided by company	Total amount required for project
Vadim Deyev, PhD	Director of Applied Research	$75,000	$22,500	10%		$58,500	$9,750
Taylor Schreiber, PhD	Director of Research	$75,000	$22,500	10%		$14,625	$9,750
Jennifer Harris, PhD	Director of Clinical Development	$150,000	$40,000	80%	$125,000	$27,000	$152.00
TOTAL PERSONNEL SALARIES & BENEFITS					$125,000	$100,125	$171,500

EQUIPMENT PURCHASES

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
TOTAL EQUIP PURCHASE COSTS			

EQUIPMENT LEASES

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
TOTAL EQUIP LEASE COSTS			

MATERIALS AND SUPPLIES

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
cGMP Drug Manufacturing	$50,000	$125,000	$175,000
TOTAL COSTS FOR MATERIALS	$50,000	$125,000	$175,000

CONSULTANT COSTS

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
UM Subcontract		$50,000	$50,000
NC-Based Manuf/Reg Consulting	$75,000	$25,000	$100,000
TOTAL CONSULTANT COSTS	$75,000	$75,000	$150,000

CONTRACTUAL COSTS

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
AppTec Testing		$30,000	$30,000
Animal Testing			
Gene Synthesis		$16,400	$16,400
TOTAL CONTRACTUAL COSTS		$46,400	$46,400

TRAVEL

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
TOTAL TRAVEL COSTS			

OTHER

Item	Amount Requested from NCBC	Amount provided by company	Total amount required for project
Publication costs		$500	$500
FDA submission fees		$25,000	$25,000
TOTAL OTHER COSTS		$25,500	$25,500

Click on the SUMMARY tab below to see the totals

North Carolina
Biotechnology Center

Business and Technology Development
Budget Summary

Project Title:	
Immune Pan-Antigen Cytotoxic (ImPACT) for Bladder Cancer	
Company:	Project Length:
Heat Biologics	12

NCBC Award Program (check only one):	
Technology Enhancement Grant (TEG)	
Company Inception Loan (CIL)	
SBIR Bridge Loan (RBL)	
Small Business Research Loan (SRL)	
Strategic Growth Loan (SGL)	X

	Amount requested from NCBC	Amount provided by company	Total amount required for project
Personnel	$125,000	$100,125	$171,500
Equipment Purchases			
Equipment Leases			
Materials & Supplies	$50,000	$125,000	$175,000
Consultant Costs	$75,000	$75,000	$150,000
Contractual Costs		$46,400	$46,400
Travel			
Other		$25,500	$25,500
TOTALS	$250,000	$372,025	$568,400

Projected Cash Disbursements from the North Carolina Biotechnology Center

Funds will be distributed after project approval and execution of the financial agreement:

For TEGs, CILs, RBLs, SRLs:

50% upfront:
40% upon midterm report submission and invoiced expenses:
10% withheld until submission of final report and invoiced expenses

For SGLs:

In accordance with the way funds from the other investor is disbursed

EXHIBIT C

MATERIAL CONTRACTS

As part of its loan application, the applicant (Company) is required to provide to the Center all the Company's material contracts to which the Company is a party, pursuant to which the Company has any continuing obligation, or which otherwise remain in full force and effect, and which fall into any of the following categories (each such contract, a "**Material Contract**"): (i) contracts with an aggregate consideration payable by or to the Company equal to at least $100,000, or (ii) contracts otherwise material to the business, condition (financial or otherwise), operations, performance, properties or prospects of the Company. Should any additional Material Contracts be finalized during the loan review process, the Company is required to submit such additional Material Contracts to the Center as soon as possible following finalization, but, in all cases, prior to execution of the loan agreement.

☐ The Company has no Material Contracts

X The Company has the following Material Contracts
Please include the title and date of the Material Contract and the name of the counterparty;

1. Ground Zero CRO Agreement 5/24/10
2. Lonza Manufacturing Agreement 10/20/11
3. Mary Crowley Cancer Center 8/29/11

EXHIBIT D
EXISTING DEBT

As part of its loan application, the applicant (Company) is required to provide to the Center a list of existing debt. "**Debt**" means with respect to the Company (i) all indebtedness of the Company for borrowed money; (ii) all obligations of the Company issued, undertaken or assumed as the deferred purchase price of property or services (other than trade payables entered into in the ordinary course of business on ordinary terms, accrued expenses (including deferred compensation) and similar ordinary course items); (iii) all obligations (contingent or otherwise) of the Company under letters of credit and all outstanding non-contingent reimbursement or payment obligations of the Company; (iv) all obligations of the Company evidenced by notes bonds, debentures or other similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses; (v) all indebtedness of the Company created or arising under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to property acquired b the Company (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property); (vi) all obligations of the Company to purchase, redeem, retire, defease or otherwise make any payment in respect of any Equity Interests (defined below) in the Company or any other person or entity or any warrants, rights or options to acquire such Equity Interests, valued, in the case of redeemable preferred interests, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends; (vii) all indebtedness referred to in clauses (i) through (vi) above secured by (or for which the holder of such Debt has an existing right, contingent or otherwise, to be secured by (or for which the holder of such Debt has an existing right, contingent or otherwise, to be secured by) and lien upon or in property (including accounts and contract rights) owned by the Company, even though the Company has not assured or become liable for the payment of such Debt; and (viii) all guarantee obligations, contingent or otherwise, of any person or entity guaranteeing or having the effect of guaranteeing any indebtedness or obligations of others of the kinds referred to in clauses (i) through (vii) above. "**Equity Interests**" means (i) in the case of a corporation, its capital stock, (ii) in the case of a partnership, its partnership interests, (whether general or limited), (iii) in the case of a limited liability company, it membership interest, (iv) in the case of an association or other entity, any shares, interest, participations, rights or other equivalents (however designated) of its capital stock or other equity interest, and (v) any other interest or participate that confers on a person or entity the right to receive a share of the profits and losses of, or distributions or assets of, the issuing person or entity.

Should any additional Debt be finalized during the loan review process, the Company is required to inform the Center in writing as soon as possible following finalization, but in all cases, prior to execution of the loan agreement.

☐ The Company has no existing Debt.
X The Company has the following existing Debt:
1. Series A Convertible Note $100,000

EXHIBIT E

REPORTING THRESHOLDS AND FORMATS
AS OF FEBRUARY 2011

Pursuant to 09 NCAC Subchapter 3M, 0205, there are three reporting thresholds established for grantees and subgrantees receiving State funds. Subject to any change that may be made to such thresholds by the Office of State Budget and Management or other state governmental authority, as of February 2011, the reporting thresholds are:

(1) Less than $25,000 – A grantee that receives, uses, or expends State funds in an amount less than twenty-five thousand dollars ($25,000) within its fiscal year must comply with the reporting requirements established by 09 NCAC Subchapter 3M (the "**Uniform Administration of State Grants Subchapter**") including: (a) a certification completed by the grantee Board and management stating that the State funds were received, used, or expended for the purposes for which they were granted; and (b) an accounting of the State funds received, used or expended. All reporting requirements shall be filed with the funding agency within six months after the end of the grantee's fiscal year in which the State funds were received.

(2) $25,000 up to $500,000 – A grantee that receives, uses, or expands State funds in an amount of at least twenty-five thousand ($25,000) and up to five hundred thousand dollars ($500,000) within its fiscal year must comply with the reporting requirements established by this Subchapter including: (a) a certification completed by the grantee Board and management stating that the State funds were received, used, or expended for the purposes for which they were granted; (b) an accounting of the State funds received, used, or expended; and (c) a description of activities and accomplishments undertaken by the grantee with the State funds. All reporting requirements shall be filed with the funding agency within six months after the end of the grantee's fiscal year in which the State funds were received.

(3) Greater than $500,000 – A grantee that receives, uses, or expands State funds in an amount greater than five hundred thousand dollars ($500,000) within its fiscal year must comply with the Uniform Administration of State Grants Subchapter including: (a) a certification completed by the grantee Board and management stating that the State funds were received, used, or expended for the purposes for which they were granted; (b) an audit prepared and completed n a licensed Certified Public Accountant for the grantee consistent with the reporting requirement of the Uniform Administration of State Grants Subchapter; and (c) a description of activities and accomplishments undertaken by the grantee with the State funds. All reporting requirements shall be filed with the funding agency and the Office of the State Auditor within nine months after the end of the grantee's fiscal year in which the State funds were received.

Unless prohibited by law, the costs of the audits made in accordance with the provision of this rule are allowable charges to State and Federal awards. The charges may be considered a direct cost or an allocated indirect cost, as determined in accordance with the cost principles outlines in the Office of Management and Budget (OMB) Circular A87. The cost of any audit not conducted in accordance with the Uniform Administration of State Grants Subchapter is unallowable and shall not be charged to State or Federal Grants.

The audit requirements in the Uniform Administration of State Grants Subchapter do not replace a request for submission of audit reports by grantor agencies in connection with requests for direct appropriation of state aid by the General Assembly. Notwithstanding the provision of the Uniform Administration of State Grants Subchapter, a grantee may satisfy the reporting requirements of Part (a)(3)(B) of the Uniform Administration of State Grants Subchapter by submitting a copy of the report required under the federal law with respect to the same funds. All grantees and sub-grantees shall use the forms of the Office of the State Budget and Management and of the Office of the State Auditor in making reports to the awarding agencies and the Office of the State Auditor.

Exhibit 10.8

COMMON STOCK SUBSCRIPTION AGREEMENT

THIS COMMON STOCK SUBSCRIPTION AGREEMENT (this "Agreement") is made as of the date set forth on the signature page hereof between HEAT BIOLOGICS T, INC., a Delaware corporation (the "Company"), and the University of Miami, a Florida non-profit corporation, (the "Subscriber").

W I T N E S S E T H:

WHEREAS, the Company desires to issue to the Subscriber the number of shares (the "Shares") of its Common Stock, par value $.0001 per share (the "Common Stock") set forth at the end of this Agreement, evidencing and representing five percent (5%) of all issued and outstanding Company common stock in each class and series on a fully-diluted basis at the time of issuance of such shares, together with fully-dilutable common shares equal to two and one half percent (2.5%) of the total number of Company common shares in each class and series issued and outstanding, pursuant to the terms and conditions of the License Agreement effective as of July 11, 2008 ("License Agreement"), and Amendment to License Agreement dated April 29, 2009 ("License Amendment"), together with that certain Assignment and Assumption Agreement to be executed by and among the Company, Subscriber, and HEAT BIOLOGICS, INC., a Delaware corporation ("HEAT") of even date hereof, and that certain Termination Agreement to be executed by and between the Subscriber and HEAT of even date hereof, and;

WHEREAS, the Subscriber desires to acquire the Shares (being sometimes referred to collectively herein as the "Securities") on the terms and conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the premises and the mutual representations and covenants hereinafter set forth, the Company and the Subscriber do hereby agree as follows:

A. SUBSCRIPTION FOR SHARES AND REPRESENTATIONS BY SUBSCRIBER

a. The Company agrees to sell and issue the Shares to Subscriber at a price equal to $.0001 per share, and the Subscriber hereby subscribes for and agrees to purchase from the Company the Shares, for said purchase price. The rights and preferences of the Common Stock are set forth in the Certificate of Incorporation of the Company. The certificate for the Shares will be delivered by the Company on or promptly following the date of this Agreement. The Company and the Subscriber mutually agree that the Shares represent five percent (5%) of the total number of issued and outstanding Company common shares in each class and series on a fully-diluted basis, together with fully-dilutable common shares equal to two and one half percent (2.5%) of the total number of Company common shares in each class and series issued and outstanding, pursuant to the terms and conditions set forth in the License Agreement and License Amendment, and incorporated by reference to this Agreement.

b. The Subscriber recognizes that the purchase of the Shares involves a high degree of risk in that (i) the Company is a start-up business with no operating history and requires substantial funds in addition to the proceeds of this transaction; (ii) an investment in the Company is highly speculative, and only investors who can afford the loss of their entire investment should consider investing in the Company; (iii) the Subscriber may not be able to liquidate his investment; (iv) transferability of the Securities is extremely limited, and (v) in the event of a disposition, the Subscriber could sustain the loss of his entire investment.

c. The Subscriber represents that he is acquiring the Shares hereunder for investment, and that he is able to bear the economic risk of an investment in the Shares.

d. The Subscriber acknowledges that he recognizes the highly speculative nature of this

investment; and he is able to bear the economic risk he hereby assumes.

e. The Subscriber hereby represents that he has been furnished by the Company during the course of this transaction with all information regarding the Company which he has requested or desired to know; that he has been afforded the opportunity to ask questions of and receive answers from duly authorized officers or other representatives of the Company concerning the terms and conditions of this offering, and any additional information which he had requested.

f. The Subscriber hereby acknowledges that this offering of the Shares has not been reviewed by the United States Securities and Exchange Commission (the "Commission") or any state regulatory authority, since this offering is intended to be exempt from the registration requirements of Section 5 of the Act pursuant to Section 4(2) of the Act and Rule 506 of Regulation D of the Commission. The Subscriber represents that the Shares are being purchased for his own account, for investment and not for distribution or resale to others. The Subscriber agrees that he will not sell or otherwise transfer the Securities (i) unless they are registered under the Act or an exemption from such registration is available, and (ii) if such transfer would violate the provisions of Section C of this Agreement.

g. The Subscriber understands that the Securities have not been registered under the Act or any state securities or "blue sky" laws and are being sold in reliance on exemptions from the registration requirements of such Act and such laws and agrees that the Securities will not be resold or transferred except as permitted under such Act and such laws pursuant to registration or exemption therefrom.

h. The Subscriber understands that there is no market for the Securities and that no market is expected to develop for the Securities. The Subscriber understands that even if a public market develops for the Shares, Rule 144 (the "Rule") promulgated under the Act requires, among other conditions, a one-year holding period prior to the resale (in limited amounts) of securities acquired in a non-public offering without having to satisfy the registration requirements under the Act. The Subscriber understands that the Company is not obligated to comply with any reporting requirements under the Securities Exchange Act of 1934, as amended, and that the Company makes no representation or warranty that it will disseminate to the public any current financial or other information concerning the Company, as is required by the Rule as one of the conditions of its availability. The Subscriber understands and hereby acknowledges that the Company is under no obligation to register the Shares under the Act or any state securities or "blue sky" laws, with the exception of certain registration rights with respect to the Shares, as set forth in the HEAT BIOLOGICS I, INC. Shareholders Agreement. The Subscriber consents that the Company may, if it desires, permit the transfer of the Securities, subject to the provisions set forth in the HEAT BIOLOGICS, INC. Shareholders Agreement, out of his name only when his request for transfer is accompanied by an opinion of counsel reasonably satisfactory to the Company that neither the sale nor the proposed transfer results in a violation of the Act, any applicable state securities or "blue sky" laws, or this Agreement.

i. The Subscriber consents to the placement of a legend on any certificate or other document evidencing the Shares as follows:

THE SHARES OF COMMON STOCK REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD OR TRANSFERRED UNLESS THE REGISTRATION PROVISIONS OF THE SAID ACT HAVE BEEN COMPLIED WITH OR UNLESS IN THE OPINION OF COUNSEL SATISFACTORY TO THE COMPANY, BOTH AS TO THE IDENTITY OF THE COUNSEL AND AS TO THE FORM AND SUBSTANCE OF THE OPINION, COMPLIANCE WITH SUCH PROVISIONS IS NOT REQUIRED.

j. Simultaneously with his execution of this Agreement, the Subscriber is executing and delivering a Shareholders Agreement between the Company and its shareholders providing for certain

preemptive rights on the part of the Subscriber and other holders of the Series A Stock and a voting agreement.

B. REPRESENTATIONS BY, AND COVENANTS OF. THE COMPANY

a. The Company represents and warrants to the Subscriber that on the date hereof:

(1) The Company is a corporation duly organized, existing and in good standing under the laws of the State of Delaware and has the corporate power to issue and sell the Shares to the Subscriber;

(2) The Shares have been duly and validly authorized and, when issued and paid for in accordance with the terms hereof, will be duly and validly issued, fully paid and nonassessable;

(3) The Company will at all times that the Shares are outstanding have authorized and reserved a sufficient number of shares of Common Stock to provide for conversion of the Shares;

(4) [reserved]

(5) The copies of the Certificate of Incorporation and By-Laws of the Company as currently in effect which have heretofore been delivered to the Subscriber are true, complete and correct.

(6) [reserved]

C. [RESERVED]

D. MISCELLANEOUS

(1) Any notice or other communication given hereunder shall be deemed sufficient if in writing and sent by registered or certified mail, return receipt requested, or delivered by hand against written receipt therefore, addressed to the Company, Atlantic Center, 119 Washington Avenue, Suite 401, Miami Beach, FL 33139, Attention: Jeff Wolf and to the Subscriber at its address indicated on the signature page of this Agreement. Notices shall be deemed to have been given on the date of mailing, except notices of change of address, which shall be deemed to have been given when received.

(2) This Agreement shall not be changed, modified or amended except by a writing signed by the parties to be charged. and this Agreement may not be discharged except by performance in accordance with its terms or by a writing signed by the party to be charged.

(3) This Agreement shall be binding upon and inure to the benefit of the parties hereto and to their respective heirs, legal representatives, successors and assigns. This Agreement sets forth the entire agreement and understanding between the parties as to the subject matter thereof and merges and supersedes all prior discussions, agreements and understandings of any and every nature among them.

(4) Upon the execution and delivery of this Agreement by the Subscriber, this Agreement shall become a binding obligation of the Subscriber with respect to the purchase of Shares as herein provided; subject, however, to the right hereby reserved to the Company to enter into the same agreements with other subscribers and to add and/or delete other persons as subscribers.

(5) NOTWITHSTANDING THE PLACE WHERE THIS AGREEMENT MAY BE EXECUTED BY ANY OF THE PARTIES HERETO, THE PARTIES EXPRESSLY AGREE THAT ALL THE TERMS AND PROVISIONS HEREOF SHALL BE CONSTRUED IN ACCORDANCE WITH AND

GOVERNED BY THE LAWS OF THE STATE OF DELAWARE, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW.

(6) [reserved]

(7) The holding of any provision of this Agreement to be invalid or unenforceable by a court of competent jurisdiction shall not affect any other provision of this Agreement, which shall remain in full force and effect.

(8) It is agreed that a waiver by either party of a breach of any provision of this Agreement shall not operate, or be construed, as a waiver of any subsequent breach by that same party.

(9) The parties agree to execute and deliver all such further documents, agreements and instruments and take such other and further action as may be necessary or appropriate to carry out the purposes and intent of this Agreement.

(10) This Agreement may be executed in one or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument.

* If Shares are being subscribed for by an entity, the attached Certificate of Signatory must also be completed.

Number of Shares Subscribed For: 300.000 Shares
Purchase Price: $ 30.00

UNIVERSITY OF MIAMI

Name(s) Exactly as to Appear on Stock Certificate

Signature	Signature (if purchasing jointly)
Name Typed or Printed	UNIVERSITY OF MIAMI Name Typed or Printed
Residence Address	c/o Diane Cook Residence Address
	250 Ashe Building
City, State and Zip Code	Coral Gables, Florida 33124 City, State and Zip Code
Telephone	(305) 284-6297 Telephone
Tax Identification or Social Security Number	59-0624458 Tax Identification or Social Security Number

This Common Stock Subscription Agreement, including a subscription contained herein is agreed to and accepted as of July 7, 2009.

HEAT BIOLOGICS I, INC., a Delaware corporation

By: Jeffery Wolf

Its: President

CERTIFICATE OF SIGNATORY

(To be completed if Shares are being subscribed for by an entity)

BART CHERNOW, M.D., MACP
VICE PROVOST FOR TECHNOLOGY ADVANCEMENT
VICE PRESIDENT FOR SPECIAL PROGRAMS RESOURCE STRATEGY
PROFESSOR OF MEDICINE AND ANESTHESIOLOGY

I, _____ of

UNIVERSITY OF MIAMI (The "Entity").

I certify that I am empowered and duly authorized by the Entity to execute and carry out the terms of the Common Stock Subscription Agreement and to purchase and hold the Shares. and certify further that the Common Stock Subscription Agreement has been duly and validly executed on behalf of the Entity and constitutes a legal and binding obligation of the Entity.

IN WITNESS WHEREOF, I have set my hand this 6th day of July , 2007.

UNIVERSITY OF MIAMI,
a Florida non-profit corporation:

By: /s/ Bart Chernow, M.D.
Bart Chernow, M.D.
Director of UM Innovation
Vice Provost of Technology Advancement

EXHIBIT 10.9

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (the "Agreement"), dated as of December 18, 2009 (the "Effective Date"), by and between Heat Biologics, Inc., a Delaware corporation having a place of business at Atlantic Center, 119 Washington Avenue, Suite 401, Miami, FL 33139 (the "Corporation"), and Jeffrey Wolf (the "CEO"), an individual residing at 100 Meridian Avenue, Apt. 242, Miami Beach, FL 33139.

W I T N E S SE T H:

WHEREAS, the Corporation and the CEO desire to set forth the terms and conditions on which, from and after the Effective Date, (i) the Corporation shall employ the CEO, (ii) the CEO shall render services to the Corporation, and (iii) the Corporation shall compensate the CEO for such services;

NOW, THEREFORE, in consideration of the foregoing and the mutual promises and covenants herein contained, the parties agree as follows:

1. EMPLOYMENT; DUTIES

(a) The Corporation engages and employs the CEO, and the CEO hereby accepts engagement and employment, as Chief Executive Officer and President of the Corporation. The CEO shall perform such services and duties as are normally incident to such positions and are commensurate with the CEO's background, education and professional standing, all as the Board of Directors of the Corporation shall reasonably determine, including but not limited to providing input regarding insurance coverage for directors and officers of the Corporation and in designing executive benefit programs. The Corporation shall also cause the CEO to be elected as a member of its Board of Directors during the term of his employment hereunder.

(b) The CEO shall perform his duties hereunder from the Corporation's principal office; provided, however, that the CEO acknowledges and agrees that the performance by the CEO of his duties hereunder may require some domestic and international travel by the CEO. The Corporation intends that the CEO will be employed in Miami-Dade County, FL.

(c) As of the Effective Date, the CEO is a Partner at Seed-One Ventures, LLC ("Seed-One") and devotes at least 50% of his time to Seed-One and Seed-One portfolio companies. The CEO hereby represents and warrants that these activities do not compete with the Corporation's business as defined in Paragraph 5 below. Within 60 days of the closing of the Corporation's Series B Convertible Preferred Stock Financing, the CEO shall devote his full time and efforts to the Corporation. Until such time that the CEO begins devoting his full time and efforts to the Corporation, the CEO will not be paid any salary under this Agreement and will not be eligible for bonuses hereunder.

(d) The Corporation recognizes that CEO is a Partner at Seed-One and, subject to the other provisions of this Agreement, may continue to serve as a Partner at Seed-One, advise Seed-One and serve on Seed-One boards that do not compete with the Corporation as defined in Paragraph 5 below.

2. TERM

The Corporation hereby employs the CEO, and the CEO hereby agrees to serve in such capacity, for the period beginning on the Effective Date and ending on the date on which the Employee's employment is terminated in accordance with paragraph 7 below (the "Employment Period").

3. COMPENSATION

(a) Subject to the terms and conditions of this Agreement, as compensation for the performance of his duties on behalf of the Corporation, the CEO shall be compensated as follows:

(i) Upon such date that (a) the Corporation has closed its Series B Preferred Stock Financing; and (b) the CEO begins devoting 100% of his time to the Corporation (the "Compensation Date"), the Corporation shall pay the CEO a base salary at the rate of $250,000 per annum (the "Base Salary") payable no less frequently than monthly in arrears on or before the first day of each succeeding month. Prior to that time, the CEO shall not be paid a salary or receive benefits from the Corporation.

(ii) Promptly after the end of the first anniversary of the Compensation Date, the CEO shall be paid a guaranteed performance bonus (the "Guaranteed Performance Bonus") of at least $25,000 (the "First Year Bonus"). Promptly after the end of the second anniversary of the Compensation Date, the CEO shall be paid a performance bonus of at least $50,000 (the "Second Year Bonus"). Promptly after the end of the third anniversary of the Compensation Date, the CEO shall be paid a performance bonus of at least $75,000 (the "Third Year Bonus"). In addition, the Board may, in its sole discretion, award the CEO a performance bonus (the "Performance Bonus") equal to up to 50% of his then outstanding Base Salary at the end of each year. The Corporation and the CEO shall use their best efforts to agree upon the performance milestones for the first year of the CEO's employment by the Corporation, and shall use best efforts to agree upon the performance milestones for subsequent years on or before the commencement of such year.

(iii) Subject to the terms of this Agreement and the CEO's continued service to the Corporation , the Board will approve:

(A) Concurrent with the execution of this Agreement, the CEO shall be entitled to receive an option to purchase up to 25,219 shares of the common stock of the Corporation (the "Common Stock") at an exercise price that is intended to be not less than the fair market value of the underlying Common Stock on the date of grant, as determined by the Board. The terms and conditions of such option, including vesting, shall be governed by a stock option agreement in a form acceptable to the Corporation. The Corporation intends that the stock option described in this Paragraph 2(iv)(A) shall be fully vested as of the date of grant.

(B) Upon the closing of the Corporation's Series B Preferred Stock Financing, the CEO shall be entitled to receive an option to purchase shares of the common stock of the Corporation (the "Common Stock") equal to 5% of the fully diluted equity of the Corporation at the time of the closing of such financing to vest monthly over a 36 month period at an exercise price that is intended to be not less than the fair market value of the underlying Common Stock on the date of grant as determined by the Board. The terms and conditions of such option shall be governed by a stock option agreement in a form acceptable to the CEO and the Corporation.

(C) The Corporation shall grant the CEO additional stock options equal to 2% of the total fully-diluted equity of the Corporation at an exercise price equal to the then current fair market value of the underlying Common Stock on the date of grant, as determined by the Board, if the Common Stock of the Corporation is traded on a recognized national exchange or NASDAQ and the market capitalization of the Corporation exceeds $250 million for 5 days of longer. The terms and conditions of such option, including vesting, shall be governed by a stock option agreement in a form acceptable to the Corporation.

(vi) The Base Salary and any additional cash bonus payments provided for in this agreement (the "Total Annual Cash Compensation") and the CEO's additional participation in the Corporation's 2009

Stock Incentive Plan and other items of the compensation package contemplated in this Agreement shall be reviewed by the Corporation at the end of each year of the CEO's employment but with no obligation to effect an increase in the Total Annual Cash Compensation paid to the CEO or to grant additional options to purchase common stock of the Corporation, provided that in no event shall the Base Salary or the Total Annual Cash Compensation be decreased.

(vii) The Corporation shall withhold all applicable federal, state and local taxes, social security and workers' compensation contributions and such other amounts as may be required by law or agreed upon by the parties with respect to the compensation payable to the CEO pursuant to this Paragraph 3(a).

(b) The Corporation shall reimburse the CEO for all reasonable expenses incurred by the CEO in furtherance of the business and affairs of the Corporation against receipt by the Corporation of appropriate vouchers or other proof of the CEO's expenditures and otherwise in accordance with such Expense Reimbursement Policy as may from time to time be adopted by the Board of Directors of the Corporation.

(c) The CEO shall be entitled to accrue paid vacation at the rate of 15 business days per annum, plus all the appropriate Corporation holidays. The CEO may carry over up to 5 days of accrued but unused vacation each year, but at no time shall the CEO have more than 20 business days of accrued but unused vacation. Upon termination of his employment, CEO shall be paid accrued but unpaid vacation in accordance with the Corporation's vacation policy.

(d) The Corporation shall also provide to the CEO and his family medical benefits at the Corporation's expense. The CEO shall also be entitled to all other benefits generally made available to the Corporation's senior executive officers from time to time.

4. REPRESENTATIONS AND WARRANTIES BY THE CEO AND CORPORATION

The CEO hereby represents and warrants to the Corporation that CEO has the full right, power and legal capacity to enter and deliver this Agreement and to perform his duties and other obligations hereunder. This Agreement constitutes the legal, valid and binding obligation of the CEO enforceable against him in accordance with its terms.

The Corporation hereby represents and warrants to the CEO as follows:

(a) The Corporation is duly organized, validly existing and in good standing under the laws of the State of Delaware, with all requisite corporate power and authority to own its properties and conduct its business in the manner presently contemplated.

(b) The Corporation has full power and authority to enter into this Agreement and to incur and perform its obligations hereunder.

(c) The execution, delivery and performance by the Corporation of this Agreement does not conflict with or result in a breach or violation of or constitute a default under (whether immediately, upon the giving of notice or lapse of time or both) the certificate of incorporation or bylaws of the Corporation, or any agreement or instrument to which the Corporation is a party or by which the Corporation of any of its properties may be bound or affected.

5. NON-COMPETITION

5.1 (a) The CEO understands and recognizes that his services to the Corporation are special and unique and agrees that during the term of this Agreement and during the NonCompete period, he shall not in any manner, directly, on behalf of himself or any person, firm, partnership, joint venture, corporation or other business entity ("Person"), enter into or engage in any business developing cancer vaccine technologies similar to the technologies under development by the Corporation, either as an individual for his own account, or as a partner, joint venturer, executive, agent, consultant, salesperson, officer, director, employee or shareholder of any Person. Recognizing that the Corporation intends to operate on a worldwide basis, these restrictions shall apply to the entire world (or if that is deemed by a court of competent jurisdiction to be unreasonable, then to North America, the European Union and Japan, and if that is deemed unreasonable, then to North America alone) .. The CEO agrees and acknowledges that the time limitation on the restrictions in this Paragraph 5, combined with the geographic scope, is reasonable. The CEO also acknowledges and agrees that Paragraph 5 is reasonably necessary for the protection of the Corporation, that through his employment the CEO shall receive adequate consideration for any loss of opportunity associated with the provisions herein, and that these provisions provide a reasonable way of protecting Corporation's business value which will be imparted to the CEO.

(b) During the Non-Compete Period, the CEO shall not interfere with or disrupt or attempt to disrupt the Corporation's business relationship with any of its customers, affirmatively suggest or propose that any of the employees of the Corporation leave such employment, or retain, help retain, or participate in retaining employees of the Corporation.

(c) The Non-Compete Period shall mean the period of time beginning on the date of the CEO's termination and ending nine (9) calendar months following such termination.

(d) In the event that the CEO breaches any provisions of this Paragraph 5 or there is a threatened breach of this Paragraph 5, then, in addition to any other rights which the Corporation may have, the Corporation shall be entitled, without the posting of a bond or other security, to injunctive relief to enforce the restrictions contained herein. In the event that an actual proceeding is brought in equity to enforce the provisions of this Paragraph 5, the CEO shall not argue as a defense that there is an adequate remedy at law nor shall the Corporation be prevented from seeking any other remedies which may be available.

6. INVENTIONS ASSIGNMENTS; CONFIDENTIAL INFORMATION

All inventions, improvements, ideas, names, patents, trademarks, copyrights, and innovations (including all data and records pertaining thereto), whether or not reduced to writing, which the CEO may originate, make or conceive during the term of his employment and for a period of three (3) months thereafter, either alone or with others and whether or not during working hours or by the use of facilities of the Corporation (except as may be originated made or conceived in connection with his consulting obligations pursuant to Paragraph 1 (c) of this Agreement), and which relate to or are or may likely be useful in connection with the business or contemplated business of the Corporation shall be the exclusive property of the Corporation.

The CEO agrees that during the course of his employment or at any time after termination, he will not disclose or make accessible to any other person, the Corporation's products, services and technology, both current and under development, promotion and marketing programs, lists, trade secrets and other confidential and proprietary business information of the Corporation or any of its clients. The

CEO agrees: (i) not to use any such information for himself or others; and (ii) not to take any such material or reproductions thereof from the Corporation's facilities at any time during his employment by the Corporation, except as required in the CEO's duties to the Corporation. The CEO agrees immediately to return all such material and reproductions thereof in his possession to the Corporation upon request and in any event upon termination of employment. The foregoing notwithstanding, the parties acknowledge and agree that the confidential and proprietary information of the Corporation and/or its clients shall not include the following: (a) information already in the public domain or hereafter disclosed to the public through no fault of the CEO; including but not limited to knowledge of (i) the business of other companies in the field, (ii) general business methods and structures useful in operating biomaterials companies, (iii) the status of patents and other technology in the field other than those of the Corporation; (b) general knowledge about the biomaterials field obtained through the CEO's academic experience, or (c) specific ideas and projections of the biomaterials field's evolution.

Except with prior written authorization by the Corporation, the CEO agrees not to disclose or publish any of the confidential, technical or business information or material of the Corporation, its clients or any other party to whom the Corporation owes an obligation of confidence, at any time during or after his employment with the Corporation.

7. TERMINATION

(a) Subject to Paragraph 2 above, the CEO's employment hereunder shall begin on the Effective Date and shall continue thereafter until terminated upon the first to occur of the following events:

(i) the death of the CEO or the Disability of the CEO, as defined below; or

(ii) termination by the Board of Directors of the Corporation, either with or without Cause (as defined below); or

(iii) voluntary resignation by the CEO after providing the Corporation with at least thirty days prior written notice.

(b) Upon termination pursuant to clause (a)(i) above and provided that the CEO (or his estate) first executes and does not revoke a release and settlement agreement in the form acceptable to the CEO and the Corporation releasing the Corporation from all claims arising from his employment within sixty (60) days of his termination, the CEO (or his estate in the event of termination as a result of the death of the CEO) shall immediately be entitled to receive six (6) months salary and any other compensation or benefits required under applicable law. In addition, such number of options to purchase shares that would have vested upon the next anniversary date of the Effective Date shall immediately vest.

(c) Upon termination pursuant to clause (a)(ii) for any reason other than for Cause (as defined below) and provided that the CEO first executes and does not revoke a release and settlement agreement in the form acceptable to the CEO and the Corporation releasing the Corporation from all claims related to his employment within sixty (60) days of his termination, the CEO shall immediately be entitled to receive twelve (12) months salary and any other compensation or benefits required under applicable law. In addition, all Restricted Shares, Common Stock and options to purchase Common Stock that would have vested through shall immediately vest.

(d) "Disability" of the CEO shall be deemed to have occurred if the CEO, by virtue of any injury, sickness, or physical condition is unable to perform substantially and continuously the duties assigned to him hereunder for more than sixty (60) consecutive or non-consecutive days out of any consecutive twelve (12) month period, exclusive of any accrued vacation.

(e) Upon termination by the Corporation during the Initial or any renewal Term pursuant to clause (a)(ii) with Cause or upon the voluntary resignation of the CEO pursuant to clause (a)(iii), such termination shall be effective immediately or on the effective date of the CEO's notice, as the case may be, and the CEO will be paid all accrued but unpaid salary due as of the Termination Date, which has not been paid to him.

(f) For purposes of this Agreement, "Cause" shall mean the unlawful conduct of the CEO constituting a felony under the law or dishonest conduct of the CEO involving" moral turpitude or causing material harm to the Corporation; willful, reckless or grossly negligent misconduct; or insubordination which is injurious to, or is reasonably likely to be injurious to, the Corporation, monetarily or otherwise, and which continues after written notice thereof by the Board of Directors.

8. NOTICES

All notices required to be given pursuant to this Agreement shall be in writing and shall be deemed given if personally delivered to the other party or if sent by the United States Mail, certified mail/return receipt requested, postage pre-paid or by a nationally recognized overnight carrier service, delivery charges prepaid. All such notices shall be addressed to the receiving party at the address set forth in the opening paragraph of this Agreement or such other address as such be provided by written notice pursuant to this Paragraph 8.

9. SEVERABILITY OF PROVISIONS.

If any provision of this Agreement shall be declared ' by a court of competent jurisdiction to be invalid, illegal or incapable of being enforced in whole or in part, the remaining conditions and provisions or portions thereof shall nevertheless remain in full force and effect and enforceable to the extent they are valid, legal and enforceable, and no provision shall be deemed dependent upon any other covenant or provision unless so expressed herein.

10. ENTIRE AGREEMENT; MODIFICATION

This Agreement contains the entire agreement of the parties relating to the subject matter hereof, and the parties hereto have made no agreements, representations or warranties relating to the subject matter of this Agreement which are not set forth herein. No modification of this Agreement shall be valid unless made in writing and signed by the parties hereto.

11. BINDING EFFECT

The rights, benefits, duties and obligations under this Agreement shall inure to, and be binding upon, the Corporation, its successors and assigns, and upon the CEO and his heirs and legal representatives. This Agreement constitutes a personal service agreement, and the performance of the CEO's obligations hereunder may not be transferred, delegated or assigned by the CEO.

12. NON-WAIVER

The failure of either party to insist upon the strict performance of any of the terms, conditions and provisions of this Agreement shall not be construed as a waiver or relinquishment of future compliance therewith, and said terms, conditions and provisions shall remain in full force and effect. No waiver of any term or condition of this Agreement on the part of either party shall be effective for any purpose whatsoever unless such waiver is in writing and signed by such party.

13. GOVERNING LAW; WAIVER OF JURY TRIAL

This Agreement shall be governed by, and construed and interpreted in accordance with, the laws of the State of Florida without regard to principles of conflict of laws. Any and all disputes, claims or controversies of any kind between the parties arising from or relating in any way to this Agreement or the interpretation, breach, termination, validity, or existence hereof, shall be finally settled by binding arbitration held in Miami, Florida, in accordance with the Employment Arbitration Rules of the American Arbitration Association. The arbitration shall take place before a single arbitrator appointed by the American Arbitration Association. With respect to any judgment, award, order or similar findings (including, without limitation, interim awards) of such arbitrators, the parties hereby agree that such judgment, award, order or similar findings shall be final and binding on the parties and shall not be subject to appeal by either party. Judgment upon any judgment, award, order or similar findings of the arbitrators (including, without limitation, interim awards) made in connection with this Paragraph 13 may be entered in any court having jurisdiction over such judgment, award, order or similar findings, or over either of the parties or any of their respective assets, and application may be made to such court for confirmation, enforcement, and/or execution of such judgment, award, order or similar findings. **The parties irrevocably waive all right to a trial by jury in any suit, action, or other proceeding hereafter instituted by or against such party in respect of its obligations hereunder or the transactions contemplated hereby.**

14. ATTORNEYS FEES, COSTS.

In the event a party breaches this Agreement, the breaching party shall pay all reasonable costs and attorneys' fees incurred by the other party in connection with such breach, whether or not any litigation is commenced.

15. INDEMNIFICATION.

As additional consideration for the CEO's agreement to perform the duties outlined herein, the CEO shall be indemnified and held harmless by the Corporation for any activity in any suit brought against him for actions undertaken on behalf of the Corporation to the maximum extent provided by law.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

Heat Biologics, Inc.

By: Michael Kharitonov, Ph.D.

Signature: /s/ Michael Kharitonov

Title: Heat Biologics Board of Directors and Member of Compensation Committee

By: John Monahan, Ph.D.

Signature: /s/ John Monahan

Title: Heat Biologics Board of Directors and Member of Compensation Committee

CEO

/s/ Jeffrey Wolf
Jeffrey Wolf

EXHIBIT 10.10

FIRST AMENDMENT TO EMPLOYMENT AGREEMENT

This FIRST AMENDMENT TO EMPLOYMENT AGREEMENT (the "Amendment") is entered into by Heat Biologics, Inc., a Delaware corporation (the "Corporation") and Jeffrey Wolf (the "CEO") to be effective as of _____, 2011.

WHEREAS, the Corporation and CEO entered into that certain Employment Agreement dated as dated as of December 18, 2009 (the "Original Agreement"); and

WHEREAS, CEO and the Corporation now desire to amend certain terms of the Original Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt and accuracy of which is hereby acknowledged, the parties agree as follows:

1. Duties. Section l(c) (Duties) of the Original Agreement is hereby deleted in its entirety and replaced with the following language: "(c) The CEO is a Partner at Seed-One Ventures, LLC ("Seed-One"). Subject to Section 2(d) below, the CEO shall devote his full time and efforts to the Corporation."

2. Compensation. Section 3(a) is hereby deleted in its entirety and replaced with the following language:

> "(a) Subject to the terms and conditions of this Agreement, as compensation for the performance of his duties on behalf of the Corporation, the CEO shall be compensated as follows:

(i) In the calendar year 2010, the Corporation shall pay CEO an annual salary of $4,000.

(ii) Starting on or after January 1, 2011 through December 31, 2011 the Corporation shall pay CEO an annual salary of $125,000 (the "Base Salary") . Starting on January 1, 2012, the Corporation shall pay CEO an annual salary of $250,000. The CEO's salary may be increased from time to time by the Board.

(iii) Within 30 days from the date of the Closing of the Corporation's Series A Preferred Stock Financing (the "Closing Date"), the CEO shall be paid a guaranteed performance bonus (the "Guaranteed Performance Bonus") of at least $25,000 (the "First Year Bonus"). Within 30 days after the end of the first anniversary of the Closing Date, the CEO shall be paid a performance bonus of at least $50,000 (the "Second Year Bonus"). Within 30 days after the end of the second anniversary of the Closing Date, the CEO shall be paid a performance bonus of at least $75,000 (the "Third Year Bonus"). In addition, the Board may, in its sole discretion, award the CEO a performance bonus (the "Performance Bonus") equal to up to 50% of his then outstanding Base Salary at the end of each year. The Corporation and the CEO shall use their best efforts to agree upon the performance milestones for the first year of the CEO's employment by the Corporation, and shall use best efforts to agree upon the performance milestones for subsequent years on or before the commencement of such year. For the avoidance of doubt, CEO will be eligible for all bonuses set forth in this section only if he is employed by the Corporation on the date such bonus becomes payable.

(iv) Subject to the terms of this Agreement and the CEO's continued service to the Corporation, the Board will approve:

(A) The Corporation and CEO agree and acknowledge that the options to purchase stock referenced in this section in the Original Agreement have been approved and granted. . .

(B) The Corporation and CEO agree and acknowledge that the options to purchase stock referenced in this section in the Original Agreement have been approved and granted.

(C) The Corporation shall grant the CEO additional stock options equal to 2% of the total fully-diluted equity of the Corporation at an exercise price equal to the then current fair market value of the underlying Common Stock on the date of grant, as determined by the Board, if the Common Stock of the Corporation is traded on a recognized national exchange or NASDAQ and the market capitalization of the Corporation exceeds $250 million for 5 days of longer. The terms and conditions of such option, including vesting, shall be governed by a stock option agreement in a form acceptable to the Corporation.

(v) The Base Salary and any additional cash bonus payments provided for in this Agreement (the "Total Annual Cash Compensation") and the CEO's additional participation in the Corporation's 2009 Stock Incentive Plan and other items of the compensation package contemplated in this Agreement shall be reviewed by the Corporation at the end of each year of the CEO's employment but with no obligation to effect an increase in the Total Annual Cash Compensation paid to the CEO or to grant additional options to purchase common stock of the Corporation, provided that in no event shall the Base Salary or the Total Annual Cash Compensation be decreased.

(vi) The Corporation shall withhold all applicable federal, state and local taxes, social security and workers' compensation contributions and such other amounts as may be required by law or agreed upon by the parties with respect to the compensation payable to the CEO pursuant to this Paragraph 3(a)."

1. Full Force and Effect. Except as modified hereby, the Original Agreement continues in full force and effect.

2. Successors and Assigns. This Amendment shall apply to, inure to the benefit of, and be binding upon the parties hereto and upon their respective heirs, legal representatives, successors and permitted assigns, except as otherwise provided herein.

3. Entire Agreement. The Original Agreement, together with this Amendment, is the entire agreement between the Corporation and CEO.

4. Governing Law. This Amendment is governed by the laws of the State of Florida.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned have caused this Amendment to be duly executed effective as of the date first written above.

Heat Biologics, Inc.

By: Michael Kharitonov, Ph.D.

Signature: _____

Title: Heat Biologics Board of Directors and Member of Compensation Committee

By: John Monahan, Ph.D.

Signature: _____

Title: Heat Biologics Board of Directors and Member of Compensation Committee

CEO

_____

Jeffrey Wolf

TYPE OF LEASE: **New** **Renewal** **Expansion** **Option** **Change/Adj.**

BUSINESS NAME: Heat Biologics

TENANT: Heat Biologics, Inc.

CONTACT: Jeff Wolf, CEO
15 TW Alexander, Suite 119, RTP, NC 27709.
(c) 917-349-1485 (o) 919-314-8324
(e-mail) jwolf@heatbio.com

PROPERTY ADDRESS: Europa Center – Suite 420
100 Europa Dr., Chapel Hill, NC 27517

LANDLORD: Europa Center, LLC.

NOTICE ADDRESS: Thomas Linderman Graham Inc.
100 Europa Dr. – Suite 190, Chapel Hill, NC 27517

RENT PAYMENTS: Europa Center, LLC, c/o Thomas Linderman Graham Inc.
P.O. Box 900002, Raleigh, NC 27675-9000

DATE LEASE SIGNED: November 18, 2011 **RENTABLE SQ. FTG**: 2,111

LEASE TERM: One (1) year + One (1) month

MOVE-IN DATE: The earlier of completion of agreed improvements or December 9, 2011

LEASE COMMENCES: January 1, 2012 **LEASE EXPIRES**: January 31, 2012

RENT COMMENCES: February 1, 2012 **RENT PSF**: $22.00

MONTHLY BASE RENT: $3,870.17 **ANNUAL BASE RENT**: $46,442.00

RENT ADJUSTMENTS: See Rent Summary for schedule.

OPERATING EXPENSE ADJUSTMENT: Base year is established as 2012

PRORATION: Calculation of Rents is based on the annual rent amount divided by a 365 day year.

OPTION TO RENEW: Provide the Tenant is not in default of any terms of the lease, at the end of the initial Term this leave may be extended for Two (2) terms of One (1) year each, commencing at the expiration of the initial term with Ninety (90) days prior written notice.
See Rent Summary for scheduled rent increase for each Option to Renew.

OPTION TO EXPAND: Provided the Tenant is not in default of any terms of this lease, and upon Tenant's written request of the desire to expand or relocate within the property, management will investigate possibilities. If an adjacent space, or other space agreeable to Tenant, is vacant a "courtesy notification" to Tenant of the availability of the space. The cost of expansion and Tenant improvements to be negotiated based on the current market condition.

ALL RENTS ARE DUE ON THE 1ST DAY OF EACH MONTH Any payment not received by the 5th of the month will incur an automatic late fee of Five (5%) percent.

SECURITY DEPOSIT: An amount equal to one (1) month rent of $3,870.17 will be held as a Refundable Security Deposit.

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Landlord
Tenant

Initials
Initials

JW
JPG

Landlord
Tenant

Initials
Initials

TENANT IMPORVEMENT AGREEMENT: Landlord agrees to the following:

1. Repair and paint to match the two (2) rear offices as needed.
2. Replace server room door.
3. Clean carpets.
4. Prepare for occupancy.

See attached EXHIBIT D for Tenant Improvement Agreement

PAID BY LANDLORD: Property Taxes, Insurance, Exterior and Common Area Maintenance, All Utilities including Common Area (Electrical, Water & Sewer), Security, Management, HVAC Maintenance, Janitorial, Trash Removal and Extermination.

PAID BY TENANT: Fire & Extended Coverage Insurance for tenant contents, Commercial General Liability Insurance for Tenant, all telephone, cable, internet, etc. installation costs and monthly service charges, and pro-rata share of Operating Expense increase over base year.

Tenant to be financially responsible for all telephone, cable, internet, etc. scheduling, and installation costs & monthly service charges which Tenant directly contracts for.

RENT SUMMARY

Heat Biologics (Tenant)

2,111 (Sq Ft)

Partial period Lease execution to 1/31/12	PSE	Monthly	Annual
BASE RENT	$00.00	$00.00	$00.00

LEASE YEAR 1 Date 2/1/12 to 1/31/13	PSE	Monthly	Annual
BASE RENT:	$22.00	$3,870.17	$36,442.00

1ST OPTION TO RENEW Date 2/1/13 to 1/31/14	PSE	Monthly	Annual
BASE RENT:	$23.00	$4,046.08	$38,552.00

2ND OPTION TO RENEW Date 2/1/14 to 1/31/15	PSE	Monthly	Annual
BASE RENT:	$23.50	$4,134.04	$49,608.50

PLEASE MAKE RENT PAYMENTS TO: Europa Center, LLC,
c/o Thomas Linderman Graham Inc.
P.O. Box 900002
Raleigh, NC 27675-9000

JW
JPG

Landlord Initials
Tenant Initials

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Landlord
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EUROPA CENTER LEASE

CONTENTS OF LEASE BY SECTION

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Landlord
Tenant

Initials
Initials

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Landlord
Tenant

Initials
Initials

EUROPA CENTER OFFICE LEASE

This lease is made as of November 18, 2011 by and between Europa Center, LLC (collectively, "Landlord") and Heat Biologics, Inc., a North Carolina corporation, dba: Heat Biologics ("Tenant"). Both parties acknowledge that Thomas Linderman Graham Inc. a North Caroling Corporation, is the authorized agent of Landlord, with full power and authority to execute this Lease on behalf of Landlord and to bind the Landlord to its terms. In consideration of the reciprocal obligations stated herein, Landlord and Tenant agree as follows:

1. DEFINITIONS. When used in the Lease, the terms listed below shall have the meanings stated in this Section 1.

(a) "Building": the five-story office building in which the Rented Space is located.

(b) "Commencement Date": the actual date on which the term of this Lease commences, as provided in Section 3 below.

(c) "Common Areas": Any existing or future equipment, improvements, areas or spaces intended for the joint use of Landlord, Tenant and other tenants, occupants or users of the Europa Center. Common Areas include but are not limited to sidewalks, driveways, stairways, halls, lobbies, elevators, passages and parking facilities.

(d) "CPI": shall mean the Consumer Price Index - U.S. City Averages for Urban Wage Earners and Clerical Workers – All Items (base year 1982-84=100), published by the United States Bureau of Labor Statistics.

(e) "Europa Center": that tract of land located in Chapel Hill Township, Orange County, North Carolina, described in Exhibit A attached hereto and incorporated herein, and all improvements situated thereon.

(f) "Lease Year": each twelve (12) month period of the Term beginning with February 1st and ending on January 31st. The first Lease Year shall begin on February 1, 2012 and shall end January 31, 2013.

(g) "Lease Premises": the Rented Space, together with the nonexclusive right to use the Common Areas as provided in Sections 23 and 24 of this Lease.

(h) "Rentable Square Feet": the useable square feet of any area multiplied by a core factor of 1.14.

(i) "Rented Space": that office space area shown as the cross-hatched area on Exhibit B attached hereto and incorporated herein, which is designated Suite 420 of the Europa Center and which consists of approximately 2,111 Rentable Square Feet.

(j) "Term": the term of this Lease as specified in subsection (a) of Section 3 below.

2. DEMISE Subject to the terms and conditions stated in this Lease, Landlord hereby leases the Leased Premises to Tenant, and Tenant hereby leases the Leased Premises from Landlord.

3. TERM.

(a) Term. The term of this Lease shall commence on the later of: (1) the date that Tenant takes possession of any part of the Rented Space, or (2) January 1, 2012. The term shall terminate at 11:59 P.M. on January 31, 2013, if not sooner terminated by Landlord pursuant to the terms of this Lease.

(b) No Reinstatement. No receipt of money by Landlord from Tenant or any other party after termination of this Lease shall reinstate, continue or extend the Term or affect any notice of termination served on Tenant by Landlord.

4. RENT.

JW
JPG

Landlord
Tenant

Initials
Initials

(a) Initial Annual Base Rent: for the First Lease Year, Tenant shall pay to Landlord annual base rent in the amount of $46,442.00, payable in equal monthly installments of $3,870.17 each, commencing February 1, 2012. For each succeeding Lease Year of the Term, Tenant shall pay to Landlord annual base rent as determined pursuant to subsection (b) below payable in equal monthly installments commencing on the first day of each Lease Year. All monthly base rent payments shall be made to Landlord at: Europa Center, LLC, c/o Thomas Linderman Graham Inc., P.O. Box 900002, Raleigh, NC 27675-9000, or at such other place as Landlord may designate from time to time in writing.

(b) Adjustments to Annual Base Rent. . See RENT SUMMARY for scheduled increases and Options to Renew.

(c) Base Rent for Partial Month. Base rent due for any partial month at the beginning of the Term shall be $127.24 per day, payable in advance on the Commencement Date. Base rent due for any partial month at the end of the Term shall be determined on a per diem basis, using the then applicable annual base rent. Calculation of Rents is based on the annual rent amount divided by a 365 day year.

(d) Operating Expense Adjustment. The Annual Base Rent shall remain in effect without adjustment throughout the Base Year. For the remainder of the term of the lease the Annual Base Rent shall be subject to periodic adjustment in accordance with the following provisions:

(i) “Base Year” shall mean the calendar year of the date of this Lease which is 2012.

(ii) “Annual Base Rent” shall mean the Initial Annual Base Rent as specified and defined above in Paragraph 4(a) of this Lease, including any and all adjustments as further stipulated in Paragraph 4(b) of this Lease for each subsequent Lease Year.

(iii) “Comparison Year” shall mean calendar year 2013. Each succeeding comparison year shall be a calendar year having an anniversary date of January 1.

(iv) “Operating Expenses” shall mean all direct costs of repair, operation, maintenance and management incurred by Landlord with respect to the buildings, grounds and premises, and properly chargeable against income as determined by standard accounting practices, these shall include the following costs by way of illustration, but not limitation: utility charges; hazard and liability insurance premiums; ad valorem real and personal proper taxes; costs incurred in the management of the building; costs incurred in securing the building; costs incurred in painting, lighting and upkeep of the building and premises; supplies; materials, equipment and tools; further operating expenses, including, but not limited to maintenance costs for maintenance, upkeep, repair and maintenance of parking lot and parking garage, trash removal; labor; uniforms; and building and premises security, and any other expenses necessary for the maintenance, repair and upkeep of any and all common areas of the Buildings, parking lots and garage, pond, fountain and grounds. Operating expenses shall not include the following: depreciation and amortization on the Buildings or equipment therein; interest expenses and all other costs related to Landlord’s financing, if any; advertising/ real estate broker’s commission, repairs or other work occasioned by fire, windstorm or other casualty of an insurable nature or by the exercise of eminent domain or any expenditures for which Landlord is entitled to be reimbursed from any source including without limitation, insurance and condemnation proceeds; costs and expenses associated with leasing to other tenants, including tenant improvement allowances, attorney’s fees, and architectural fees, if any, costs directly attributable to the design and construction of improvements, or renovating or decorating, painting or redecorating space for other tenants; expenses in connection with services or other benefits of a type which are not provided to Tenant but which are provided to another tenant or occupant, if any, the cost of clean-up or remediation of hazardous or toxic wastes which are not caused by Tenant; costs., fines or penalties incurred due to violation by Landlord or any other tenant of the terms and conditions of any lease, laws or regulations, if any; amounts for services paid to entities of Landlord which exceed the amount that would have been paid to unaffiliated entities; all costs. Items and services for which any tenant or third party reimburses Landlord; or any improvements of a capitalized asset.

(v) Landlord shall provide Tenant with a statement showing actual Operating Expenses within 990 days after the end of each comparison year. Balance due, if any, shall be paid in full by Tenant

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Within 30 days of receipt. If in the twelve-month period preceding the computation of each Operating Expense Adjustment, the occupancy of the net Rentable Square Feet of the Building averages less than ninety-five percent (95%), then it is agreed that the Landlord's Operating Expenses will be adjusted for such year so that such Operating Expenses shall be computed as though the net Rentable Square Feet of the Building has been ninety-five percent (95%) occupied for such calendar year.

(e) Option to Renew: Provided the Tenant is not in default of any terms of this lease, at the end of the Initial Term, this lease may be extended for Two (2) terms of Once (1) year each, commencing at the expiration of the initial term with Ninety (90) days prior written notice. See Rent Summary for scheduled rent increases for each Option to Renew.

(f) Option to Expand: Provided the Tenant is not in default of any terms of this lease, and upon Tenant's written request of their desire to expand or relocated within the property, management will investigate possibilities. If an adjacent space, or other space agreeable to Tenant, is vacant or is soon to become vacant, prior to leasing to another prospect, Europa Center will provide a "courtesy notification" to Tenant of the availability of the space. The cost of expansion and Tenant Improvements to be negotiated based on the current market conditions.

(g) Additional Rent. All other charges, costs and sums required to be paid by the Tenant to Landlord under this Lease shall be deemed to be additional rent, and shall be collectable by Landlord as suck.

(h) Independent Covenant. The obligation to pay any and all rent hereunder is a separate and independent covenant of Tenant, and no breach or alleged breach by Landlord of the terms hereof shall give Tenant any right to withhold or escrow any rental payments when due.

5. LATE PAYMENT. Tenant recognized and acknowledges that if rent payments are not received when due, Landlord will suffer damages and additional expense. Tenant therefore agrees that a last fee equal to five (5%) percent of the rent which is late may be assessed by Landlord as additional rent if the Landlord has not received any monthly installment of annual rent or other rent or additional rent due pursuant to this Lease within five (5) days of its due date. If any check given in payment of tent is not honored when due, Landlord may assess the late fee and may also require that subsequent rent payments be made by certified or cashier's check. Landlord' rights under this Section 5 are in addition to and may be exercised cumulatively with Landlord's rights and remedies under Section 14 below.

6. SECURITY DEPOSIT. Landlord acknowledges receipt from Tenant of the sum equal to One (1) month rent of $3,870.17 which sum Landlord shall retain as security for the performance by Tenant of each of its obligations under this Lease. The security deposit will be placed in a non-interest bearing trust account If Tenant fails at any time to perform its obligations, Landlord may at its option apply the deposit, or so much thereof as is required, to cure Tenant's default. If at any time prior to the termination of this Lease Landlord depletes the deposit in whole or in part, Tenant shall immediately restore the amount so used by Landlord. Unless Landlord uses the deposit to cure a default of Tenant, or to restore the Leased Premises to the condition that Tenant is required to leave them at the conclusion of the Term, Landlord shall within thirty (30) days of the termination of the Lease refund so much of the deposit as it continues to hold Tenant, less any interest earned.

7. USE OF LEASED PERMISES AND COMPLIANCE WITH LAW. The Leased Premises shall be used only for general office purposes, and for no other purposes without the Landlord's prior written consent. Tenant shall not use the Leased Premises for any unlawful purpose or in any manner that might constitute a nuisance. Tenant shall comply with all land use covenants and Rules and Regulations (see Exhibit C) pertaining to the Leased Premises, and all ordinances and regulations of governmental authorized applicable to the Leased Premises.

8. SIGNS. Landlord shall furnish, install and maintain a sign at the entry to Tenant's office, and a Building directory at the convenient location in the Building, listing the name of the Tenant and the suite number of Tenant's entrance office. No other signage shall be installed by Tenant anywhere at the Europa Center without Landlord's written consent which may be withheld in Landlord's sole discretion. Any other sign requested by the Tenant and approved by Landlord which is of grater cost that the sign ordinarily furnished by the Landlord shall be paid for by the Tenant, and shall be installed by the Landlord at Tenant's expense.

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9. CARE AND MAINTENANCE. Subject to the provisions of Section 29, Tenant shall, at the Tenant's own expense, keep the Rented Space in good condition and shall pay for the repair of any damages caused by the Tenant, its agents, employees, invitees or contractors. Tenant shall make at its sole cost and expense, replacements or restorations, in quality equivalent to or better than the original work, as may be required to maintain the Rented Space in good repair and condition, ordinary wear excepted. With respect to repairs requested by Tenant to be performed by Landlord, the Tenant shall pay the Landlord for any expense incurred by the Landlord, including overtime, in the event repairs, alterations, decorating or other work in the Rented Space are not made during ordinary business hours.

10. ALTERATIONS BY TENANT.

(a) Requirements. Tenant shall not do any painting or decorating, or erect any partitions, make any alterations in or additional to the Rented Space or do any nailing, boring or screwing into the ceilings, walls floors (collectively and individually, "Alterations") without the Landlord's prior written general and specific consent in each and every instance, with the exception of picture handing and limited installation of shelving. Landlord may withhold its consent, in its sold discretion. Unless otherwise agreed by Landlord and Tenant in writing, the work on all such Alternations shall be performed either by or under the direction of Landlord, but at the cost of Tenant. If the Landlord give its preliminary consent to any such Alternations, the Tenant shall furnish to the Landlord for approval before commencement of the work or delivery of any materials to the Europa Center all of the following:

(i) all plans and specifications;
(ii) names and addresses of all contractors;
(iii) copies of all contracts;
(iv) all necessary permits;
(v) an indemnification of Landlord by all contractors in form and amount satisfactory to Landlord; and
(vi) certificates of insurance from all contractors performing labor or furnishing materials, insuring against any and all claims, costs, damages, liabilities and expenses which may arise in connection with such Alterations.

Within ten (10) business days of receiving all of the items specified in (i) through (v) above, infull and complete form, Landlord shall specifically approve or disapprove in writing each of the items. Tenant shall modify, supplement or substitute such items as Landlord disapproves, pursuant to Landlord's written instructions, and resubmit such items to Landlord for its approval. Landlord shall respond in writing to each resubmission within ten (10) business days. Tenant shall not commence any work or have any supplies or materials delivered to the Europa Center until it has received Landlord's specific written approval of all such items.

(b) No Interference or Disruption. The Alterations and all related construction activities shall not interfere with the normal operations of the Europa Center. The Landlord reserves the right to determine whether the Alterations or any portion of them must be made after normal business hours.

(c) Liability. Regardless of who performs any Alterations and notwithstanding Landlord's consent thereto, Tenant shall hold the Landlord, its agents and employees forever harmless from any and all liabilities of every kind and description which may arise out of or be connected in any way with the Alliterations. Any mechanic's lien filed against the Rented Space or the Europa Center for work or materials claimed to have been furnished to the Tenant shall be discharged of record by the Tenant within ten (10) days after filing, at the Tenant's expense. Upon completing any Alterations, the Tenant shall furnish the Landlord with contractors' affidavits, full and final waivers of lien and receipted bills covering all labor and materials expended and used. All Alterations shall comply with all insurance requirements and with all ordinances and regulations, of any applicable public authority. All Alterations shall be performed in good and workmanlike manner, using first class materials.

(d) Ownership. All Alterations, made by either party, including without limitation all paneling, decorations, partitions, railings, mezzanine floors, carpets, galleries, heating or air conditioning equipment, plumbing, electrical machinery and equipment, shall become the property of the Landlord and shall remain upon and be surrendered with the Rented Space as a part of the Rented Space at the end of the Term; provided that if requested by Landlord on termination of this Lease, Tenant shall restore the Rented Space to the same condition as at the Commencement Date. Furniture

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and movable trade fixtures which are installed by Tenant at its expense, except for those referred to above, shall remain Tenant's property and may be removed at any time prior to the termination of the Term provided Tenant is not then in Default and further provided Tenant promptly repairs any damage caused by such removal. Any such trade fixtures which Tenant has the right to remove under the above provisions, or personal property belonging to Tenant or to any invitee, assignee or subtenant, shall be deemed abandoned by Tenant if not removed prior to termination of the Term, and shall become the property of the Landlord without any payment or offset for the property, if Landlord so elects. If the Landlord does not so elect, the Landlord may remove any fixtures of property from the Leased Premises and store them at the Tenant's sole risk and expense or dispose of them in any manner, including the sale, scrapping or destruction thereof, and to the extent permitted by law Tenant waives all claims against Landlord therefore. The Tenant shall repair and restore, and save the Landlord forever harmless from, any and all damage to the Leased Premises caused by such removal, whether by Tenant or by the Landlord.

11. ACCEPTANCE OF LEASED PREMISSES. Occupation by Tenant shall constitute acceptance by the Leased Premises AS IS, except for latent defects and deficiencies specified in writing by Tenant to Landlord within ten (10) days after Tenant's occupancy. Landlord makes no representation or warrant, oral or written, as to the condition of the Leased Premises nor as to the use of fitness of the Leased Premises for any particular purpose except for general office use. Landlord shall not be responsible for obtaining any governmental approvals or permits necessary to enable Tenant to occupy or use the Leased Premises (other than the certificates of occupancy or other approvals related to work done by Landlord to upfit the Rented Space). The Landlord shall not be responsible for obtaining any certificate of occupancy or other approvals required in connection with construction work done by the Tenant or contractors engaged by the Tenant.

12. DELAY IN COMMENCEMENT. Landlord shall not be liable to Tenant or any third party for failure to deliver possession of the Rented Space of Tenant on or before the Commencement Date, if such failure is due to any of the following:

(i) labor disputes and/or material shortages;
(ii) force majeure or acts of God, including but not limited to abnormal weather conditions;
(iii) the hold over or retention of possession of any other tenant, tenants, or occupants; or
(iv) any other circumstances beyond Landlord's reasonable control.

Under such circumstances, the Base Rent shall be abated until the Rented Space is available for occupancy by Tenant, and not such failure to give possession of the Commencement Date shall affect the validity of this Lease or the obligation of the Tenant under this Lease. At the option of Landlord, to exercised within thirty (30) days of the Commencement Date, the Lease may be amends so that the Term is extended by the period of time possession by Tenant is delayed. The Rented Space shall not be deemed to be unready for Tenant's occupancy or incomplete if:

(i) only minor or insubstantial details of construction, decoration or mechanical adjustment remain to be done in the Rented Space or any part of the Rented Space;
(ii) the delay in the availability of the Rented Space for occupancy shall be due to special work, changes, alterations or additions required or made by Tenant in the layout or finish of the Rented Space or any part thereof;
(iii) the delay is caused in whole or in part by the delay of Tenant in submitting plans, supplying information, approving plans, specifications or estimates, giving authorizations or otherwise; or
(iv) the delay is caused in whole or in part by delay and/or default on the part of Tenant and/or its subtenant or subtenants.

In the event of any dispute as to whether the Rented Space are ready for Tenant's occupancy, the decision of the Landlord's architect shall be final and binding on the parties.

13. ASSIGNMENT OR SUBLEASE.

(a) Assignment. Tenant may not assign this Lease without the prior written consent of the Landlord, which shall not be unreasonably withheld. If Tenant is not a publically owned corporation whose outstanding voting stock is listed on a national securities exchange, then any transfer of any interest in Tenant that results in a change of the controlling ownership of Tenant shall be deemed an assignment of this Lease and a default by Tenant hereunder, provided that nothing herein shall be deemed to prohibit (i) a public officering of the stock of Tenant pursuant to the Securities Act of 1933

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and/or Securities Exchange Act of 1934, as amended; or (ii) a transfer of ownership between the current owners of Tenant and their spouses, children, or grandchildren by inter vivos or testamentary transfer. Any involuntary transfer of any interest in Tenant or Tenant's interest in this Lease shall e deemed an assignment of this Lease and a default hereunder.

(b) Subletting. Tenant may not sublet the Leased Premises or any part thereof without the prior written consent of Landlord, which shall not be unreasonably withheld. In any event, Tenant shall not advertise or publicize the Leased Premises for subletting whether through a broker, agent, representative or otherwise at a rental rate less than that for which space in the Europa Center is being offered for rent by Landlord. If Tenant seeks to sublet all or any part of the Leased Premises, then the following shall apply:

(1) Prior to any sublease, Tenant shall first notify Landlord in writing of its intent to sublet all or a portion of the Leased Premises, such notice to include a copy of the proposed subleased. At any time within fifteen (15) business days after service of said notice, Landlord shall notify Tenant that:

(i) it consents to the sublease; or

(ii) it refuses to consent to the sublease; or

(iii) with respect to a proposed sublease of the entire Rented Space, that it terminates this Lease effective as of the beginning of the proposed sublease term, which Landlord shall be fully empowered to do, at Landlord's option, if Tenant seeks to sublet the entire Rented Space; or

(iv) with respect to a proposed sublease of part of the Rented Space, that, effective as of the beginning of the sublease term, it amends the Lease to reduce the Rented Space by the portion of the Rented Space proposed to be sublet and further amends the Lease because of the reduction of the Rented Space so that all calculated items are reduced proportionately to the reduction in Rentable Square Feet of the Rented Space.

(2) If Tenant shall sublet the Leased Premises at a rental or other economic benefit in excess of the then current Base Rent, Fifty percent (50%) of such excess shall be for benefit of Landlord and shall be paid to Landlord in cash promptly when due under any such sublease as additional rent due under this Lease.

(3) Tenant agrees to pay to Landlord, on demand, all reasonable costs incurred by Landlord in connection with any request by Tenant for Landlord's consent to any sublease, including but not limited to reasonable attorney's fees and recording fees.

(4) Any sublease shall not release Tenant of its liability under this Lease or permit any subsequent sublease.

14. DEFAULT BY TENANT AND LANDLORD'S REMEDIES.

(a) Events of Default. In addition to the other occurrences listed elsewhere in this Lease, the occurrence of any one or more of the following shall constitute a default hereunder.

(1) If Tenant fails to pay any rent or other monetary payments as and when provided in this Lease;

(2) If Tenant breaches any other agreement or obligation herein set forth and fails to cure such breach within ten (10) days after notice thereof; or if cure of the breach would require more than ten (10) days to effect, if Tenant fails to initiate action necessary to cure such breach within the ten (10) day period and to pursue such action diligently thereafter until the breach is cured;

(3) If there is a levy, execution, attachment or taking of property, assets or the leasehold interest of Tenant by process of law or otherwise or in satisfaction of any judgment, debt or claim; or

(4) If Tenant files, or has filed against it, any petition or action for relief under any debtor's relief law (including bankruptcy, reorganization or similar actions or proceedings) either in state or federal court;

(b) Landlord's Rights and Remedies. In the event of any default, Landlord may at any time thereafter, with or without notice or demand and without limiting Landlord in the exercise of any right

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or remedy which Landlord may have by reason of default.

(1) Terminate this Lease;

(2) Without terminating this Lease, terminate Tenant's right to possession of the Leased Premises, enter upon and take possession of the Leased Premises and rent the Leased Premises for a reasonable rental for the account of tenant, and after paying from rents collected the Reasonable costs of such entry, reletting and collection and the costs of any necessary repairs made by Landlord which Tenant is obligated to make hereunder, apply the remainder of the rent collected to the amounts due and to become due from Tenant hereunder;

(3) Pursue any other remedy now or hereafter available to Landlord under this Lease or under the laws of the state of North Caroline.

All rights and remedies of Landlord pursuant to this Section shall be cumulative, and may be exercised singly, successively or, if appropriate, concurrently. In the event Landlord terminates this Lease or terminates Tenant's right to possession of the Leased Premises, then Tenant shall surrender possession of the Premises to Landlord, and Landlord shall have the full and free right to enter into and upon the Rented Space with or without process of law, to repossess the Rented Space, to expel or remove the Tenant and any others who may be occupying or be within the Rented Space, to remove any and all property form the Rented Space and to change the locks on the Rented Space without being deemed in any manner guilty of trespass, eviction or forcible entry or detainer,. In any event of default by Tenant, Landlord shall be entitled to recover from tenant all damage incurred by Landlord by reason of Tenant's default, including buy not limited to: any unpaid rent; to costs of recovering possession of the Premises, including reasonable attorney's fees; expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorney's fees, and any real estate commission actually paid; any loss of future rental; and a pro rata portion of any leasing commission paid by Landlord based on the number of days of any period for which a commission was paid that remain after the date of Tenant's default. Any rent unpaid when due, including additional rent not paid upon demand, shall bear interest from the date due at the rate of the twelve percent (12.00%) per annum.

(c) Treatment of Tenant's Property. Any and all property which may be removed from the Rented Space by the Landlord pursuant to the authority of the Lease or law, to which the Tenant is or may be entitled, may be handled, removed or stored by the Landlord at the risk, cost and expense of the Tenant, and except strictly as required by law the Landlord shall in no event be responsible for the value, preservation or safekeeping thereof. The Tenant shall pay to the Landlord, upon demand any and all expenses incurred in such removal and all storage charges for such property so long as the property shall be in the Landlord's possession or under the Landlord's control. Any such property of the Tenant not retaken form storage by the Tenant within thirty (30) days after the end of the tem, however terminated, may be disposed of by Landlord in any manner whatsoever, including without limitation, the sale, scrapping and/or destruction of the property without any further obligation to the Tenant, and Tenant shall pay to Landlord promptly on demand the reasonable expenses of such disposal.

(d) Landlord's Lien on Tenant's Interest. Tenant hereby grants to Landlord a first lien upon the interest of Tenant under this Lease to secure the payment of Moneys due under this Lease, which lien may be enforced in equity.

(e) Landlord's Lien on Tenants' Property. Tenant hereby grants to Landlord a Lien for the payment of rent additional rent, additional rent and all other moneys to be paid by Tenant to Landlord hereunder, upon all of the goods, wares, chattels, fixtures, furniture, equipment and other property of Tenant which may be in or upon the Rented Space or the Europa Center. Such lien may be enforced in any lawful manner by the Landlord.

(f) Landlord's Option to Cure. If Tenant defaults in the performance of any of its obligations under this Lease, including without limitation, its obligations under Section 9 hereof, then Landlord or any mortgagee or ground lessee of Landlord may, at its option, cure such default, and Tenant shall pay to Landlord or such mortgagee or ground lessor, as the case may be, the cost of such cure immediately upon being billed for same.

(g) No Waiver. The failure of Landlord to declare Tenant to be in default at any time or to

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exercise any of its rights or remedies upon default any by Tenant shall not be deemed to be a waiver by Landlord of any of its rights or remedies hereunder.

15. HOLDING OVER. I the event the Tenant remains in possession of the Rented Space after the expiration of the Term without the written consent of Landlord, then the Tenant shall be a tenant at sufferance from month to month only, and the Tenant shall then be obligated to pay one hundred fifty percent (150%) of the then current Base Rent and all other sums then payable hereunder ("Holding Over Rent"), in equal installments on the first day of each calendar month for so long as Landlord is kept out possession of the Rented Space. Neither such payment nor the acceptance of such payment shall in any way constitute a waiver of the rights of Landlord to dispossess the Tenant and recover possession of the Rented Space and the just and former estate of the Landlord and to bring any action for damages suffered by Landlord on account of Tenant's failure to vacate the Rented Space.

16. SURRENDER OF TENTED SPACE. Upon the expiration or other termination of the Term, Tenant shall quit and surrender to Landlord the Rented Space, broom clean, in good order and condition, ordinary wear accepted, and Tenant shall remove all of its property except as otherwise provided in Section 10.

17. DAMAGE TO RENTED SPACE OR BUILDING.

(a) Landlord's Insurance. Landlord shall maintain standard fire and extended coverage insurance covering the Building in an amount not less than 80% (or such greater percentage as may be necessary to comply with the provisions of any co-insurance clauses of the policy) of the "replacement cost" thereof as such term is defined in the Replacement Cost Endorsement to be attached hereto, insuring against special causes of loss (including the perils of fire and lighting), such coverages and endorsements to be as defined, provided and limited in the standard bureau forms prescribed by the insurance regulatory authority for the State of North Caroline. Subject to the provisions of Section 19 below, such insurance shall be for the sole benefit of Landlord and under its sole control.

(b) Notice by Tenant. If the Rented Space is damaged or destroyed by any peril covered by the insurance to be provided by Landlord under subparagraph (a) above, Tenant shall give immediate written notice thereof to Landlord.

(c) Extensive Damage. If the Rented Space is so damaged by any peril covered by the insurance to be provided by Landlord under subparagraph (a) above that rebuilding or repairs cannot in Landlord's estimation be completed within one hundred fifty (150) days after the date upon which Landlord is notified by Tenant of such damage, this Lease shall terminate, and the rent shall be abated during the unexpired portion of this Lease, effective upon the date of the occurrence of such damage.

(d) Repairable Damage. If the Rented Space is damaged by any peril covered by the insurance to be provided by Landlord under subparagraph (a) above, but only to such extent that rebuilding or repairs can, in Landlord's estimation, be completed within one hundred fifty (150) days after the date upon which Landlord is notified by Tenant of such damage, this Lease shall not terminate, and Landlord shall, at its sole cost and expense, thereupon proceed with reasonable diligence to rebuild and repair the Rented Space to substantially the condition in which it existed prior to such damage, except that Landlord shall not be required to rebuild, repair or replace any part of the partitions, fixtures, additions and other improvements which may be have been placed in, on or about the Rented Space of Tenant. There shall be no abatement of rent during any such period of rebuilding and repair.

(e) Landlord's Options to Terminate:

(1) Notwithstanding anything herein to the contrary, in the event the holder of any indebtedness secured by a mortgage or deed of trust covering the Building requires that the insurance proceeds be applied to such indebtedness, then Landlord shall have the right to terminate this Lease by delivering written notice of termination to Tenant within fifteen (15) days after such requirement is made by any such holder, whereupon all rights and obligations hereunder thereafter accruing shall cease and terminate.

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(2) Notwithstanding any other provision herein, if any portion of the Rented Space is damaged or destroyed during the final Lease Year of the initial term or any extension term of this Lease, then Landlord shall have the option to terminate this Lease upon written notice to Tenant within thirty (30) days of the date of such damage.

(3) Notwithstanding any other provision herein, if any portion of the Building other than the Rented Space is destroyed by fire or other destructive force and Landlord, it its sold discretion, elects to cease operation of the Europa Center as a result of such damage, then Landlord shall have the option to terminate this Lease upon written notice to Tenant within thirty (30) days of the date of such damage.

18. TENANT'S INDEMNITY OF LANDLORD AND TENANT'S INSURANCE.

(a) Tenant's Indemnity of Landlord. Tenant shall indemnify and save the Landlord, Thomas Linderman Graham Inc., and their respective agents and employees harmless against any and all claims, demands, costs, and expenses, including reasonable attorney's fees for the defense thereof, arising directly or in directly out of or in connection with Tenant's occupancy at the Europa Center or from any breach or default on the part of Tenant in the performance of any covenant or agreement on the part of Tenant to be performed pursuant to the terms of this Lease, or from any act or negligence of Tenant, its agents, servants, employees or invitees, in or about the Europa Center. Furthermore, Tenant covenants to arrange defense of Landlord, Thomas Linderman Graham Inc., and their respective agents and employees from any such claim, demand or action by counsel reasonably acceptable to Landlord.

(b) Tenant's Commercial General Liability Insurance. Tenant shall at all times during the Term, at its sole cost and expense, procure and maintain in force and effect a policy or policies of commercial general liability insurance issued by a company or companies from time to time approved by Landlord, which companies must be authorized to transact business in North Carolina. Such policy or policies shall insure against loss, damage or liability for injury to or death of persons and loss or damage to property occurring from any cause whatsoever in , upon or about the Europa Center. Such policies of public liability insurance shall name Landlord as an additional insured and shall be in amounts and afford coverage against perils as reasonably required from time to time by Landlord. Coverage shall initially be in the single limit amount of one million dollars ($1,000,000.00). Such policy of policies shall include affirmative coverage of Tenant's indemnity of Landlord pursuant to subsection (a) above.

(c) Tenant's Property Insurance. Tenant shall obtain and maintain property insurance upon its furniture, equipment, trade fixtures and any other personal property of Tenant or of any third parties which may from time to time be located in, on or around the Europa Center. Such insurance shall be maintained in the amount of the full replacement costs of such property. All such policies shall include a waiver of subrogation of any and all claims against the Landlord and name of the Landlord as an additional insured. Tenant shall look solely to its insurance policy for recovery of any loss for any such property, ad in no event shall it make any claim against the Landlord for any loss to any such property. The Tenant hereby releases Landlord from any such liability, and Tenant shall indemnity and hold the Landlord harmless form and against any claim of Tenant's insurance carrier or arising out of Tenant's failure to maintain such insurance.

(d) Tenant's Business Interruption Insurance. Tenant shall at all times during the Term maintain business interruption insurance, insuring Tenant from loss, damage, cost or expense from any disruption to or interruption to its business resulting from damage to or malfunction of the Rented Space or the Building or any components thereof or any of the systems (heating, plumbing, mechanical or otherwise) or utilities serving them. Such insurance shall cove a continuous period of disruption or interruption of not less than one hundred eighty (180) days per occurrence.

(e) Policies or Certificates of Insurance. At the request of Landlord, the Tenant shall furnish certified copies of policies or certificates of insurance in the form or on ACORD 27 bearing notations evidencing the payment of premiums and evidencing the insurance coverage required to be carried by Tenant hereunder. Each policy and certificate shall contain an endorsement or provision requiring not fewer than thirty (30) days written notice to Landlord prior to the cancellation diminution in the perils insured against or reduction of the amount of coverage of the particular policy in question.

19. TENANT'S WAIVER OF CLAIMS; MUTUAL RELEASES.

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(a) Tenant's Waiver of Claims. To the extent permitted by law, the Tenant releases the Landlord and Thomas Linderman Graham Inc., and their respective agents and servants from, and waives all claims for damage or injury to person or property or disruption to business sustained by the Tenant or any occupant of the Europa Center, the Building or the Rented Space, or any part or any of the them, resulting from any accident, mishap or other occurrence in or about the Europa Center, whatever the cause. This shall include but not be limited to, the flooding of basements or other subsurface areas, and damage caused by refrigerators, sprinkling devices, air conditioning and/or electrical equipment, water, snow, frost, steam, excessive heat or cold, falling plaster, broken glass, sewage, gas, odors or noise or the bursting or leaking of pipes or plumbing fixtures, and shall apply equally whether any such damage results from the act or neglect of the Landlord, Thomas Linderman Graham Inc., other tenants, occupants or servants in the Building or any other person, and whether such damage be caused or result from anything or circumstance above mentioned or referred to, or any other thing or circumstance whether of a like nature or of a wholly different nature.

(b) Landlord's Release. Notwithstanding anything to the contrary contained in this Lease, Landlord hereby releases Tenant from any and all liability for loss or damage caused by fire or any of the extended coverage perils coverable by the insurance required to be carried by Landlord in subsection 17(a) above, even if the insured peril shall be brought about by the default, negligence or other action of the Tenant, its agents, employees, invitees or any of them.

(c) Tenant's Release. Notwithstanding anything to the contrary contained in this Lease, Tenant hereby releases Landlord from any and all liability for loss or damage coverable by the insurance required to be carried by Tenant in Section 18 above, even if the insured peril shall be brought about by the default, negligence or other action of the Landlord, its agents, employees, tenants, invitees or any of them.

20. EMINENT DOMAIN. If all of the Rented Space, or such part thereof as will make the same unusable for the purposes contemplated by this Lease, be taken under the power of eminent domain (or a conveyance in lieu thereof), then this Lease shall terminate as of the date possession is taken by the condemner, and rent shall be adjusted between landlord and Tenant as of that date. If only a portion of the Rented Space is taken and Tenant can continue use of the remainder, then the Lease will not terminate, but rent shall abate in a just an proportionate amount to the loss of use occasioned by the taking. Tenant shall have no right or claim to any part of any award made to our received by Landlord for any taking and not right or claim for any alleged value of the unexpired portion of this Lease; provided, however, that Tenant shall not be prevented from making a claim against the condemning party (but not against Landlord) for any moving expenses, loss of profits, or taking of Tenant's personal property (other than its leasehold estate) to which Tenant may be entitled. In the event of a temporary taking of ninety (90) days or less, this Lease shall not terminate but the term of this Lease shall be extended by the period of the taking and the rent shall abate in proportion to the area taken for the period of such taking.

21. UTILITIES AND OTHER SERVICES.

(a) Standard Services. Landlord shall furnish:

(1) Heat and/or air conditioning to maintain the Rented Space at a reasonably comfortable temperature from 6:00 a.m. until 11:59 p.m. on Monday through Friday and 8:00 a.m. until 8:00 p.m. on Saturdays and 12:00 p.m. on Sunday, except on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day.

(2) During the times specified in Subsection (a) above, Landlord shall furnish the Rented Space, at not costs to Tenant, with electricity and maintenance of building standard fluorescent lighting, composed of 2' c4' fixtures. Incandescent fixtures, table lamps, all lighting other than the building standard fluorescent lighting, dimmers and all lighting controls other than controls for the aforesaid building standard fluorescent lighting shall be services and maintained by Tenant at Tenant's expense. Landlord shall also furnish the Rented Space, at not additional cots, with electricity for lighting other than the building standard fluorescent lighting and for the operation of general office machines, such as electric typewriters, dictating equipment, adding machines and calculators, and general service non-production type office copy machines. Landlord shall have the right to enter and inspect the Rented Space and all electrical devices therein from time to time with reasonable notice.

(3) Elevator service in the Building.

(4) Janitorial and cleaning services Monday through Friday of each week, except the holidays listed above. Landlord's cleaning service shall include emptying of normal office trash

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cans and disposing of their contents. Tenant shall dispose of all other refuse, boxes, cans, books, abandoned furniture and all other large, unusual or heavy items at Tenant's sole cost and expense and shall not permit the accumulation thereof in the Rented Space or elsewhere in the Building or at the Europa Center. It is understood that employees of Landlord are prohibited as such from receiving any packages or other articles delivered to the Building for Tenant and that, should any such employee receive any such packages or articles, he or she is doing so shall be the agent of Tenant and not of Landlord. Landlord shall not be liable in any way for any damage or inconvenience caused by the cessation or interruption of such heating, air conditioning electricity, elevator, or janitor or cleaning service occasioned by fire, accident, strikes, break down, necessary maintenance, alterations, repairs, replacements, conduct of other tenants, requirements of public authority or causes beyond Landlord's control.

(b) Extended Services. In the event the Tenant desires to utilize any of the Landlord's services specified in this Section beyond the hours of permitted use, Tenant shall, prior to such use, request permission from the Landlord and obtain, in writing, signed by Landlord and Tenant, an agreement specifying the charge for such use to be paid by Tenant to Landlord and the time of such payment. In the event that Tenant makes any such use without such request and mutual agreement then, and in such event, Tenant covenants and agrees to pay to Landlord for such use an amount determined by Landlord's selected engineer, upon demand.

(c) Special Equipment of Tenant. For computers and all other equipment requiring heavier than the normal office use of electricity, Tenant shall separately mater (or submeter, if approved by Landlord in writing). At its expense, the electricity serving such equipment and shall pay upon demand all costs to Landlord for such utility consumption; or, in the alternative, Tenant shall, prior to utilizing any such equipment, enter into a written agreement with Landlord specifying the charge for such uses to be paid by Tenant to Landlord, the tie of such payment and the method of determining increases from time to time as rates change or such use by Tenant is changed. In the event that Tenant makes any such use without such request and mutual agreement, then, an in such event, Tenant covenants and agrees to pay to Landlord for such in an amount determined by Landlord's selected engineer, upon demand. Landlord may cause an electric check meter to be installed in the Leased Premises or cause a reputable independent electrical engineering or consulting firm to survey and determine the value of the electric service furnished for such excess electric current, the costs of either of which shall be paid by Tenant. Tenant shall be responsible for all repairs, maintenance, replacements and service to all equipment serving Tenant's computers and other special equipment, including without limitation HVAC equipment. Tenant covenants to pay for its electrical consumption referred to in this paragraph in a timely fashion, which covenant shall survive the expiration or earlier termination of this Lease as hereinafter provided.

22. COVENANT OF TITLE AND QUIET ENJOYMENT. Landlord covenants that it has full right and power to execute this Lease and to grant the estate demised in this Lease. The Landlord's title is and always shall be paramount to the title of the Tenant, and nothing herein contained shall empower the Tenant to do any act which can, shall or may encumber such title. Landlord also covenants that if Tenant promptly and punctually complies with each of its obligations hereunder, it shall peacefully have and enjoy the possession of the Leased premises during the term of this Lease, provided that no action of Landlord in repairing or restoring the Rented Space or in Working in other space in the Building, shall be deemed a breach of this covenant.

23. COMMON AREAS.

(a) Nonexclusive Right to Use. Tenant shall have the right together with other tenants and occupants and invitees to the non-exclusive use of the sidewalks, driveways, stairways, halls, lobbies, elevators and passages in the Building and at the Europa Center for reasonable ingress to and egress from the Rented Space, and for no other purpose, subject to the other provisions of this Lease, including without limitation the Rules and Regulations in Exhibit C.

(b) Controlled Access. The Common Areas and roof are not for the use of the general public, and Landlord shall in all cases retain the right to control and prevent access thereto by all persons whose presence, in the judgment of Landlord, shall be prejudicial to the safety, character, reputation and interests of the the Europa Center and its tenants.

(c) Landlord's Right to Close or Alter. The Landlord reserves the right to use any portion of the Common Areas from time to time and/or to deny access to the same temporarily in order to

repair, maintain or restore such facilities or to construct improvements under, over, along, across and upon the same, and to relocate such Common Areas, for the benefit of the Europa Center and its tenants.

24. USE OF PARKING FACILITIES. Subject to the other provisions of this Lease, Tenant shall have free non-exclusive use of parking facilities, driveways and islands for Tenant, Tenant's employees, Tenant's business invitees and Tenant's agents, from 6:00 a.m. through 11:00 p.m. each day of the week. Such areas for non-exclusive parking spaces shall serve all tenants, their employees, business invitees and agents; provided, however, that at not time during any day of the original or extended term of this Lease shall the aggregate number of non-exclusive parking spaces actually occupied by Tenant, Tenant's employees, business invitees and agents exceed Seven (7) of the parking spaces on the site (which figure is a maximum number of spaces to be utilized by or for the Tenant at nay one time, but Landlord in on respect guarantees that such number of spaces will in fact be available at any one time for the Tenant). Tenant shall upon written notice from Landlord, within five (5) days, furnish Landlord, or its authorized agent, the state motor vehicle license number assigned to each of its motor vehicles to be parked on the site and the motor vehicles o all of its employees employed in the Rented Space. Tenant shall not at any time park any trucks or any delivery vehicles in the parking areas or driveways, except as specifically designated by Landlord from time to time, and shall confine all truck parking, loading and unloading to times and locations specifically designated by Landlord from time to time. Tenant shall require all trucks servicing Tenant to be promptly loaded or unloaded and removed from the site. Landlord hereby reserves the exclusive right with respect to the use of parking facilities, roadway, sidewalks, driveways, island and walkways for advertising purposes. Tenant covenants and agrees to enforce the provisions of this Lease against Tenant's employees and business invitees. Landlord may from time to time circulate free parking stickers for the purpose of identifying motor vehicles of Tenant and Tenant's employees and/or circulate free validation tickets for the purpose of identifying Tenant's business invitees. Landlord shall have the right, but not the obligation: (a) to police said parking facilities, (b) to provide parking attendants, (c) to cause unauthorized and/or unstickered motor vehicles to be towed away at the sole risk and expenses of the owner of such motor vehicles, (d) to designate certain parking spaces to be for the exclusive use of the handicapped, for the exclusive use of certain tenants and/or for the exclusive use of visitors, (e) to use any portion of the parking facilities from time to time and/or to deny access to the same temporarily in order to repair, maintain or restore such facilities or to construct improvements, under, over, along, across and upon the same for the benefit of the site and to grant easements in the Parking facilities to public and quasi-public authorities and, (f) to adopt and modify from time to time rules and regulations for parking and vehicular ingress and egress, for traffic speed and flow and for times and places for move-ins, move-pouts and deliveries.

25. INFORMATION CONCERNING TENANT. Tenant shall furnish within fifteen (15) days after request from Landlord such current information concerning the financial condition of Tenant as Landlord may reasonably require. Such financial information shall include (but is not necessarily limited to a financial statement dated not more than twelve (12) months prior to Landlord's request. Such financial statement shall be prepared in accordance with generally accepted accounting principles and certified by a certified public accountant. A general partner or officer or manager of Tenant shall furnish a certification to Landlord to the effect that there either has or has not been any material adverse change in the financial condition of Tenant since the date of the financial statement submitted, and if such certification states that there has been a material adverse change, furnishing such detailed concerning same as landlord may request. If Tenant does not execute and return such certificate as required above, Tenant hereby irrevocably appoints Landlord as its attorney in fact to execute such certificate on half of Tenant.

26. AUTHORITY OF TENANT. Tenant shall furnish to Landlord within fifteen (15) days after request from Landlord such corporate or company resolutions, certificates of incumbency, partnership resolutions, partnership agreements, operating agreements, bylaws or legal opinions or other information as Landlord may reasonably request in order to confirm that the execution and delivery of this Lease has been duly authorized by Tenant and that the person(s) executing this Lease on behalf of Tenant were duly authorized to do so. All such company, corporate or partnership resolutions, certificates or agreements shall be certified as being duly adopted and/or in full force and effect, without amendment, by an appropriate officer, manager or partner of Tenant.

27. ESTOPPEL. Within ten (10) days after request therefore by Landlord, Tenant agrees to execute and deliver to Landlord a certificate prepared by Landlord to any proposed mortgagee, ground lessee or purchaser of the Europa Center or to Landlord certifying (if such is the case) that

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this Lease is in full force and effect, that there are no defenses or offsets thereto, or stating those claimed by Tenant, and such other facts related to this Lease, the Leased Premises or Tenant as Landlord may request. If Tenant does not execute and return such certificate as required above, Tenant hereby irrevocably appoints Landlord as its attorney in fact to execute such certificate on behalf of Tenant.

28. RIGHT OT RELOCATE.

(a) Substitute Premises. Landlord, at its option, may substitute for the Rented Space other space (hereafter called "Substitute Space") within the Building before the Commencement Date or at any time during the Term. As far as is reasonably possible, the Substitute Space shall have comparable Rental Square Feet and a configuration substantially similar to the Rented Space. Landlord shall pay Tenant's reasonable cost of moving Tenant's furnishings, trade fixtures, inventory, and existing telephone system to the Substitute Space. Except as provided in this Section, Landlord shall not be liable or responsible in any way for damages or injuries suffered by Tenant pursuant to the relocation in accordance with this Section, including, but no limited to, loss of goodwill, business or profits.

(b) Notice. Landlord shall give Tenant at least sixty (60) days notice of its intention to relocate Tenant to a substitute Space. This notice will be accompanied by a floor plan of the Substitute Space. After such notice, Tenant shall have seven (7) calendar days within which to accept in writing the proposed Substitute Space. If Tenant does not accept the Substitute Space within such period of time, this Lease shall terminate at the end of the Sixty (60) days following the service of notice on the Tenant.

(c) Alteration of Substitute Space. Landlord agrees to construct or alter, at its own expense, the Substitute Space as expeditiously as possible so that it is in substantially the same condition that the Rented Space was in immediately prior to the relation. Landlord shall have the right to reuse the fixtures, improvements, and alterations used in the Rented Space. Tenant agrees to occupy the Substitute Space as soon as Landlord's work is substantially completed.

(d) Rent During and After Relocation. Except as provided above, all of Tenant's obligations under this Lease, including the payment of rent, will continue despite Tenant's relocation to the Substitute Space. Upon substantial completion of the Substitute Space, this Lease will apply to the Substitute Space as if it had been the Rented Space originally described I the Lease, Tenant shall use all reasonable efforts to open for business in the Substitute Space as quickly as is reasonably possible under the circumstances.

29. LANDLORD'S ACCESS TO RENTED SPACE. The Tenant shall permit the landlord to erect, use and maintain pipes, ducts, wiring and conduits in and through the Rented Space. The Landlord or Landlord's agent shall have the right to enter upon the Rented Space, to inspect them, to perform janitorial and cleaning services and to make such repairs or alterations to the Rented Space or the Building as the Landlord may deem necessary or desirable, and the Landlord shall be allowed to take all material into and upon the Rented Space that may be required for repairs and alterations without the same constituting an eviction of the Tenant in whole or in part, and the rent reserved shall in no wise abate (except as provided in Section 17) while repairs and alterations are being made by reason of loss or interruption of business of the Tenant's or otherwise. If the Tenant shall not be personally present to open and permit an entry into the Rented Space at any time when for any reason an entry into the Rented Space shall be necessary or permissible, the Landlord or Landlord's agents may enter the same by a master key, or may forcibly enter the same, without rendering the Landlord or such agents liable therefore (if during such entry Landlord or Landlord's agents shall accord reasonable care to Tenant's property) and without in any manner affecting the obligations and covenants of this Lease. Nothing herein contained, however, shall be deemed or construed to impose upon the Landlord any obligations, responsibility or liability whatsoever, for the care, supervision or repair of the Building or any part thereof, other than as provided in this Lease. The Landlord shall also have the right at any time without the same constituting an actual or constructive eviction and without incurring any liability to the Tenants therefore, to change the arrangement and/or locations of entrances and passageways, doors and doorways, and corridors, elevators, toilets, parking areas and other Common Areas. The Landlord shall have the right to show the Rented Space to prospective new tenants during the last 120 days of the Term The Landlord shall not be liable to the Tenant for any expense, injury, loss or damage resulting from work done in or upon, or the use of, any adjacent or nearby building, land, street or alley.

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30. MANAGING AGENT. Landlord reserves the right to designate a Managing Agent and to delegate any or all of Landlord's powers, duties, obligations, or rights under this Lease to the Managing Agent. To the extent Landlord's duties or obligations under this Lease are assumed in writing by the Managing Agent, Landlord shall not be responsible for the assumed duties or obligations. Tenant's rights and obligations under this Lease shall not be affected by designation of a Managing Agent by the Landlord.

31. SUBORDINATION. This Lease is subject and subordinate to all security liens, mortgages, deeds of trust and related financing instruments which may now or hereafter affect the Europa Center or any part thereof, and to all renewals, modifications, consolidations, replacements, amendments and extension thereof, unless Landlord or any lender secured by a mortgage, deed of trust or similar security instrument elects to make this Lease superior to same, which it may do at its option. Tenant shall execute within ten (10) days after request any certificate, subordination agreement, priority agreement or other form on instrument in confirmation of such subordinate or superior status that Landlord may request, including an agreement to attorn. Tenant hereby irrevocably appoints Landlord its attorney in fact to execute and deliver any such instrument on behalf of Tenant if Tenant fails or refuses to execute or deliver same as required by this Lease. Tenant shall also execute within ten (10) days after request an agreement with any lender pursuant to which Tenant agrees to give such lender a minimum period of sixty (60) days after Tenant's notice to such lender for the lender to cure Landlord's default prior to Tenant's terminating this Lease due to Landlord's default.

32. RESERVATION OF RIGHTS. Landlord hereby reserves to itself and its successors and assigns the following rights (all of which are hereby consented to by Tenant):

(a) to change the street address and/or name of the Building and./or the arrangement and/or location of entrances, passageways, doors, doorways, corridors, elevators, stairs, toilets or other public parts of the Building;

(b) to grant to anyone the exclusive right to conduct any particular business or undertaking in the Building; and

(c) to construct future phases of the Europa Center attached to the Building.

Landlord may exercise any or all of the foregoing rights without being deemed to be guilty of an eviction, actual or constructive, or a disturbance or interruption of the business of Tenant or Tenant's use of occupancy of the Leased Premises.

33. NOTICES. Any notices which Landlord or Tenant requires or desires to give to the other relating to this Lease or the Leased Premises must be in writing and shall be deemed sufficiently given and delivered if:

(a) Hand-delivered to the following addresses:

If to Landlord: Europa Center, LLC
c/o Thomas Linderman Graham Inc.,
100 Europa Drive, Suite 190, Chapel Hill, NC 27517

If to Tenant: Heat Biologics, Inc.
100 Europa Drive, Suite 420, Chapel Hill, NC 27517

-OR-

(b) Sent by facsimile transmission to the following facsimile numbers:

If to Landlord: Europa Center, LLC
c/o Thomas Linderman Graham Inc.,
Facsimile No. (191) 929-7913

If to Tenant: Heat Biologics, Inc.
100 Europa Drive, Suite 420, Chapel Hill, NC 27517

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(c) Send payment of monthly rent to the following address:

Europa Center, LLC c/o Thomas Linderman Graham Inc.
P.O. Box 900002, Raleigh, NC 27675-9000

Either party may change its designated facsimile number for receipt of notice by written notice to the other party pursuant to this Section 33.

34. ENTIRE AGREEMENT; MODIFICATION. This Lease contains the entire agreement of the parties in regard to the Leased Premises. There are no oral agreements exiting between them and there shall be no oral changes. Neither Landlord nor any agent of Landlord has made any representations, warranties or promises with respect to the Rented Space, the Building or the Europa Center, or the use of any amenities or facilities, except as expressly set forth in this Lease. Any agreement made after this Lease is signed shall be ineffective to change, waive, modify, discharge, or terminate it in whole or in part unless such agreement is in writing and executed by both Landlord and Tenant.

35. RIDERS AND EXHIBITS. All riders and exhibits attached to this Lease and initialed by the Landlord and the Tenant are hereby made a part of this Lease as thought inserted in this Lease.
The following Exhibits are attached hereto and incorporated herein:

Exhibit A	Site of Europa Center
Exhibit B	Sketch of Rented Space
Exhibit C	Rules and Regulations
Exhibit D	Tenant Improvement Agreement

36. SECTION HEADINGS. The headings of sections are for convenience only and do not limit or alter the contents of the sections.

37. NUMBER AND GENDER. The words “Landlord” and “Tenant” wherever used in the Lease shall be construed to mean plural where necessary, and the necessary grammatical changes required to make the provisions hereof apply either to corporations, partnerships or individuals, men or women, shall in all cases be assumed as though in each case fully expressed.

38. GOVERNING LAW. This Lease shall be governed and construed pursuant to the laws of North Carolina.

39. SEVERABILITY. If any term, covenant or condition of this Lease or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Lease shall not be affected thereby, and each term, covenant or condition of this Lease shall be valid and be enforced to the fullest extent permitted by law.

40. MODIFICATION BY MORTGAGEE. Should any mortgagee or ground lessee of Landlord require a modification or modifications of this Lease, “Which modification or modifications will not bring about any increased cost or expense to Tenant or in any other way substantially change the rights and obligations of Tenant hereunder, then Tenant shall execute a written modification to such effect within ten (10) business days of request by Landlord.

41. BINDING EFFECT. Each provision of this Lease shall extend to and shall bind and inure to the benefit of the Landlord and the Tenant and their respective heirs, legal representatives, successors and assigns.

42. LIMITATION ON RIGHT OF RECOVERY AGAINST LANDLORD. Tenant acknowledges and agrees that the liability of Landlord under this Lease shall be limited to its interest in the Europa Center and any judgments rendered against Landlord shall be satisfied solely out of the proceeds of the sale of its interest in the Europa Center. No personal judgment shall lie against Landlord upon extinguishment of its rights in the Europa Center and any judgment so rendered shall not give rise to any right to execution or levy against Landlord’s assets. The provisions hereof shall inure to Landlord’s successors and assigns, including any Mortgagee. The foregoing provisions are not intended to relieve Landlord from the performance of any of Landlord’s obligations under this Lease, but only to limit the personal liability of Landlord in case of recovery of a judgment against Landlord; nor shall the foregoing be deemed to limit Tenant’s rights to obtain injunctive relief or specific

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performance or to avail itself to any other right or remedy which may be awarded Tenant by law or under this Lease.

43. BROKERAGE. The Tenant and Landlord each represents to the other that it has dealt directly with and only with Triangle Commercial, Inc., d/b/a CresaPartners as agent for Tenant and Thomas Linderman Graham Inc., as agent for Landlord as brokers in connection with this Lease, and that no to her brokers procured this Lease or are entitled to any commission in connection with the Lease and in the event either party has hired another broker such hiring party shall indemnify, defend and hold forever harmless the other party from and against any claim by such hired broker and from and against any and all costs directly or indirectly arising out of any such hiring. Triangle Commercial, Inc., d/b/a CresaPartners shall be paid by Thomas Linderman Graham Inc. pursuant to a separate commission agreement.

44. CONFIDENTIALITY. The terms of this Lease are confidential. Neither Landlord nor Tenant shall disclose any term of this Lease, including but limited to any rental provision, to any third party; provided that Landlord shall have the right to disclose terms to a prospective or existing mortgagee, ground lessee or purchaser, and Tenant shall have the right to disclose terms to Tenant's bank, Tenant's accountants, Tenant's attorneys and other professional bound by an obligation of confidentiality to Tenant. Both parties shall require any such third parties to whom they disclose information regarding this Lease to keep in information confidential.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Lease, to be effective as of the date first stated above.

LANDLORD:
Europa Center, LLC herein represented by its duly authorized agent,
Thomas Linderman Graham Inc.,
100 Europa Dr., Suite 190, Chapel Hill, NC 27517

Attest: /s/ Illegible

/s/ John P. Graham
John P. Graham, Exec V. P.

TENANT
Heat Biologics, Inc.

Attest: /s/ Illegible

By: /s/ Jeff Wolf
Jeff Wolf, CEO

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EXHIBIT A

SITE OF THE EUROPA CENTER

Attached to and Made Part of Lease for

Heat Biologics, Inc.

Beginning at a point in the western right of way line of Europa Drive where said point intersects with the southern right of way line of U.S. Highway 15-501 Service Road; thence along said western right of way line of Europa Drive in a southeasterly direction four (4) calls as follows: (1) South 13 20=51@ East 70.68 feet to a point; (2) South 05 11=27@ East 121.49 feet to a point; (3) along a curve to the left having a radius of 755.00 feet, a total arc distance of 468.67 feet to point; (4) South 41 42-17@ East 121.01 feet to a pint where the western right of way line in Europa Drive intersects with the northern right of way line of Legion Road; thence along the northern right of way line of Legion road in a southwesterly direction two (2) calls as follows: (1) along a curve to the left having a radius of 4,492.86 feet, an arc distance of 278.96 feet to a point; (2) along a curve to the left having a radius of 1.236.50 feet, an arc distance of 225.42 feet to a point in the property line of now or formerly GDJ Coggin Partnership; thence along said Coggin line two (2) calls as follows: (1) North 61 10=20@ West 223.32 feet to a point; (2) North 00 59=15@ East 596.46 feet to a point in the property line of now or formerly McDonald=s Corporation; thence along said McDonald=s line two (2) calls as follows: (1) North 51 01=45@ East 209.48 feet to a point; (2) North 01 00=52= East 181.55 feet to a pint in the southern right of way line of U>s> Highway 15.501 Service Road; thence along said right of way line three (3) calls as follows: (1) North 50 36-56@ East 4.54 feet to a point; (2) along a curve to the right having a radius of 120.0 feet, an arc distance of 71.30 feet to a point; (3) North 84 52=22@ East 29.97 feet to a Point and Place of Beginning and being all of Europa Center according to survey entitled AAs Built Survey of Europa Center, Chapel Hill, Orange Co., North Caroline @ dated 15 December 1988 and prepared by Murphy Yelle Associates Registered Land Surveyors, Raleigh N.C., and being the same property conveyed to North Carolina Office Company by dated November 12, 1984 recorded I Book 491, page 173, Orange County Registry.

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EXHIBIT B

SKETCH OF RENTED SPACE

Attached to and Made Part of Lease for

Heat Biologics, Inc.

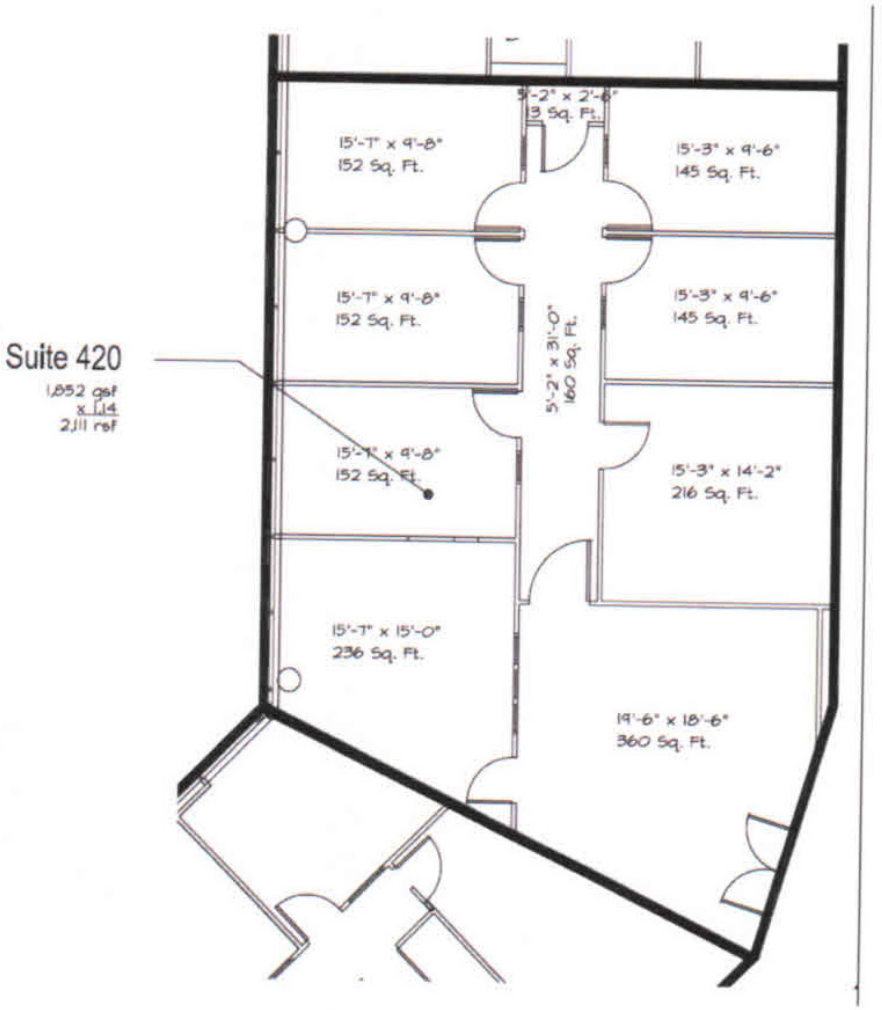

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EXHIBIT C

RULES AND REGULATIONS

Attached to and Made Part of Lease for

Heat Biologics, Inc.

1. The Tenant shall not use the name of the Building, the Europa Center, or any future designation of any of these, for any purpose other than that of business address of the Tenant, and shall ever use any picture or likeness of the Building or the Europa Center in any circulars, notices, advertisements or correspondence without the Landlord's express consent in writing. Tenant shall not use the name of the Landlord for any reason without the Landlord's written consent.

2. The entrances, lobbies and other Common Areas shall be under the exclusive control of Landlord and shall not be obstructed or used for any purpose other than ingress and egress.

3. Tenant shall not bring to the Building or operate therein any engine, boiler, dynamo or machinery of any kind, or carry on any mechanical operations in the premises, or place any explosive therein, or use any kerosene, oils or burning fluids therein, without first obtaining in each and every instance the prior written consent of Landlord.

4. The Rented Space shall not be used for the purpose of lodging or sleeping rooms, nor in any way to damage the reputation of the Building; and Tenant shall not disturb or permit the disturbance of other tenants of the building by the use of musical instruments or other noises, odors, canvassing of any occupant of the Building, failing to maintain order in the Building, or by any other interference whatsoever.

5. The Tenant shall not install any musical instrument or equipment in the Building or any antennae, aerial wires or other equipment inside or outside the Building, without, in each and every instance, prior written approval by Landlord. The use thereof, if permitted, shall be subject too control by the Landlord so that others shall not be disturbed or annoyed.

6. Landlord shall reserve the right to exclude or eject from the Building animals of every kind, bicycles, and all canvassers and other persons who conduct themselves In such a manner as to be, in the judgment of Landlord, an annoyance to the Tenants or a detriment to the Rented Space.

7. The toilet rooms, water closets and other water apparatus shall not be used for any purpose other than those for which they are intended. Tenant shall not waste water in any manner whatsoever, including without limitation the tying, wedging or otherwise fastening open any faucet. The cost of repair of any damage resulting from misuse or abuse by Tenant, its employees or guests, shall be borne by Tenant.

8. The Tenant shall not place or allow anything to be against or near the glass of partitions, doors, or windows of the Rented Space which may diminish the light in, or be unsightly from, the exterior of the Building or any Common Areas. If there are any glass entry doors to the Rented Space, Tenant must obtain Landlord's prior written approval, which Landlord may give or withhold it its sole discretion, of all furniture, interior finishes and other objects visible through such glass door(s). Shades, draperies or other forms of inside window covering, if not so provided by Landlord, must be of such shape, color, and materials as are approved by Landlord in writing prior to installation.

9. If Tenant desires a safe for depositing of valuables or securities, Landlord shall have the right to prescribe its weight, size and proper position. Nothing whatsoever shall be brought into the Building by Tenant, its agents, employees, or visitors which has a weight of more than 200 pounds per square foot, unless Landlord approves same and its proper positions.

10. If Tenant desires telegraphic, telephonic, burglar alarm or signal service, the Landlord will, upon request, direct where and how connections and all wiring for such service shall be introduced and run. Without such direction, no boring, cutting or installation of wires or cables is permitted.

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Landlord
Tenant

Initials
Initials

11. Two keys to the front door of the Building will be provided at no costs. A reasonable number of additional keys will be provided upon payment of fees therefore. No locks shall be placed upon any doors of the Rented Space without first obtaining the written consent of Landlord and furnishing Landlord with keys to same. Tenant will not permit any duplicate keys to be made (all necessary keys to be furnished by Landlord). Upon termination of this Lease, Tenant shall surrender to Landlord all keys. Tenant shall notify Landlord immediately if Tenant loses any keys to any entry door of the Building. Tenant shall pay all costs incurred by Landlord as a result of such loss, including but not limited to the cost of re-keying any door(s) and providing new keys to existing Tenants of the Building.

12. The Tenant shall be responsible for the locking of doors in and to the Rented Space. Any damage resulting from neglect of this obligations shall be paid by Tenant.

13. All persons entering or leaving the Building may be required to identify themselves to watchman by registration or otherwise, and to establish their right too enter t=or leave the Building.

14. No person or persons, other than employees of the Building, shall be employed by Tenant for the purpose of cleaning or taking care of the Rented Space without the written consent of Landlord. Any person or person so employed by Tenant (with the written consent of Landlord) shall be subject to and under the control and direction of, Landlord in the use of the Building and its facilities.

15. Landlord reserves all vending rights.

16. No part of the Building shall be used or in any way appropriated for gambling, immoral or other unlawful practices, and no intoxicating beverages or liquors shall be sold in Building.

17. The Tenant shall not do or permit to be done in the Rented Space or at the Europa Center, or bring or keep anything in or on the Rented Space of the Building, which shall in any way increase the rate of fire insurance on the Building, or on the property kept in the Building, or obstruct or interfere with the right of other Tenants or in any way injure or annoy them, or conflict with the laws relating to fires, or with the regulations of the Fire Department, or any part of these laws, or conflict with nay rules or ordinances of the Board of Health.

18. Tenant shall not, without Landlord's prior written consent, after full disclosures, keep, use, store or dispose of substances designated or containing components designated as hazardous, dangerous, toxic or harmful and/or subject to regulation under any federal, state or local law, regulation or ordinance, or around the Rented Space.

19. Concealed weapons are strictly prohibited.

20. Security access cards remain the property of the Landlord, and shall be used as prescribed by Landlord.

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EXHIBIT D

TENANT IMPROVEMENT AGREEMENT

Attached to and Made Part of Lease for

Heat Biologics, Inc.

Landlord agrees to the following:

1. Repair and paint to match the two (2) rear offices as needed.
2. Replace server room door.
3. Clean carpets.
4. Prepare for occupancy.

Tenant agrees to be financially responsible for all telephone, cable, internet, etc. scheduling, and installation costs & monthly service charges which Tenant directly contracts for.

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Tenant

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EXHIBIT 10.12

Non-Exclusive Evaluation and Biological Material License Agreement

By And Between

American Type Culture Collection (ATCC)

And

Heat Biologics, Inc.

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THIS NON-EXCLUSIVE EVALUATION AND BIOLOGICAL MATERIAL LICENSE AGREEMENT (the "**Agreement**"), effective as of the date of the last signature to the Agreement ("**Effective Date**"), is by and between the **American Type Culture Collection**, a District of Columbia not-for-profit corporation, having it offices at 10801 University Boulevard, Manassas, Virginia 20110-2209, USA (hereafter referred to as " **ATCC**") and **Heat Biologics, Inc.**, a for-profit corporation, having offices at 119 Washington Avenue, Suite 401, Miami Beach, FL 33139, USA (hereafter referred to as "**Licensee**").

WHEREAS, ATCC is organized for the primary purpose of the acquisition authentication, preservation, production, development and distribution of biological materials, information, technology, intellectual property, and standards for the support, advancement, validation, and application of scientific knowledge, research and analysis, and

WHEREAS, ATCC sells and has sold it products only to registered customers and only under the terms of a Material Transfer Agreement ("AMT" as hereinafter defined and included as Appendix A) that placed certain restrictions o the use of ATCC Materials purchases from ATCC; and

WHEREAS, Licensee initially desires to obtain a non-exclusive Evaluation License from ATCC to Evaluate Biological Materials and Confidential Information under the terms herein; and

WHEREAS, if such Evaluation is successful, Licensee desires to obtain a non-exclusive license to develop, make, use, and Sell Licensed Products (as hereinafter defined); and

WHEREAS, ATCC is willing to grant to Licensee a non-exclusive Evaluation License and a non-exclusive biological material license to utilize the ATCC Materials to Evaluate, develop, make, use, and Sell Licensed Products in accordance with the terms and conditions set forth herein;

NOW THEREFORE, for good and valuable consideration and the following mutual promises, the receipt and sufficiency of which is hereby acknowledged, ATCC and Licensee agree to the following terms and conditions in order to utilize the ATCC Materials and hereby enter into this Agreement:

ARTICLE 1. DEFINITIONS

1.1 "**Affiliate**" means, in respect of any entity, any company, partnership or other entity which, directly or indirectly Controls, is Controlled by or is under the common Control with that entity. For purposes of this definition, "Control" (including, with correlative meanings, the terms "Controlled by" and "under common Control with"), mean, (a) in the case of a

corporate entity, direct or indirect ownership of fifty percent (50%) or more of the stock or shares entitled to vote for the election of directors; b) in the case of a non-corporate entity, direct or indirect ownership of fifty percent (50%) or more of the equity, or (c) possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of the entity n questions (whether through ownership of securities or other ownership interest, by contract or otherwise).

1.2 "**Agreement Term**" means the term of this Agreement as set forth in Section 12.3 herein.

1.3 **"ATCC Materials"** means the items listed in Appendix D. If Licensee desires to acquire additional ATCC Materials during the Agreement Term, the Licensee will notify ATCC in writing. Approval of additional ATCC Materials by ATCC will not be unreasonably withheld, continued or delayed, but will be contingent on ATCC's determination of whether such additional ATCC Material is available for distribution under this Agreement. Fees associated with the addition of ATCC Material are subject to Section 2.9 and Section 4.1(b)(iv).

1.4 "**Biological Material**" means the ATCC Materials, their Progeny, Unmodified Derivatives and Modifications, either individually or jointly.

1.5 **"Biological License Application**" or "**BLA**" means a Biological License Application as defined in the U.S. Food, Drug and Cosmetic Act and the regulations promulgated thereunder, and any corresponding or equivalent foreign application, registration or certification.

1.6 "**Calendar Year**" shall mean each successive period of twelve (12) months commending on January 1 and ending on December 31.

1.7 "**Clinical Trial**" means a human clinical trial, the principal purpose of which is to establish safety and efficacy in patients with the disease being studied, as further described in the U.S. Food, Drug and Cosmetic Act and the regulations promulgated thereunder, and any corresponding or equivalent foreign law or regulation, which is designed and intended to be of a size and statistical power sufficient to serve to support the filing of a marketing application with the relevant regulatory authority for the indication of being studied. A Clinical Trail shall be deemed to have been initiated upon the first dosing of the first patient in such Clinical Trail.

1.8 "**Commercial Use**" means the Sale, license, lease, export or other transfer or distribution of the Biological Materials for financial gain or other commercial purposes and/or the use of Biological Materials: (a) to provide a service to a Third Party for financial gain; (b) to produce or manufacture products for general sale, or products for use in the manufacture of products ultimately intended for general sale, including but not limited to quality assurance or quality control; (c) in connection with ADMI; (Absorption, Distribution, Metabolism and Excretion) testing; (d) in connection with drug potency or toxicity testing which does not include either screening multiple cell lines for potential inclusion in a screening multiple cell lines for potential inclusion in a screening assay system or screening multiple compounds in a system for internal research purposes only; or (f) for research conducted under an agreement wherein a Third Party for profit entity receives a right whether actual or contingent to the results of the research.

1.9 "**Commercial Use License**" means a non-exclusive license or use the Biological Materials to develop, make, use and Sell Licensed Products in the Territory in the Field of Use, subject to the terms and conditions of this Agreement.

1.10 "**Commercial Use License Term**" means the term of the Commercial Use Licensee as set forth in Section 12.2.

1.11 "**Confidential Information**" means information of the disclosing party that has commercial value, including, without limitation, trade secrets, compounds, reagents, Biological Materials, techniques for the handling and use of Biological Materials; know-how, formulas, processes, product ideas, inventions (whether patentable or not), improvements, copyrightable or patentable materials, schematics, and other technical, business, financial, and product development plans, forecasts, strategies, and information, and that the disclosing party discloses to the receiving party. IN order to be considered Confidential Information, information disclosed orally or in any other transitory medium must be identified to the Recipient as confidential orally at the time of discloser and in writing within thirty (30) days after such disclosure. Confidential Information shall not include information that the receiving party can demonstrate:

(a) was/is at the time of disclosure in the public domain; or

(b) has come into or is in the public domain through no fault of the receiving party; or

(c) was/is known to the receiving party prior to disclosure thereof by the disclosing party and was not acquired directly from the disclosing party on a confidential basis, as shown by written records in the receiving party's possession; or

(d) was/is lawfully disclosed to the receiving party without obligation of confidence by a Third Party which was not under an obligation of confidence to the disclosing party with respect thereto; or

(e) was/is independently developed n the receiving party without reference to or use of Confidential Information provided by the disclosing party as shown by written records in the receiving party's possession; or

(f) is required by law to be disclosed, contingent upon the receiving party informing the disclosing party prior to any said disclosure in the sufficient time to enable the disclosing party to seek a protective order or other appropriate legal remedy to protect the disclosure.

1.12 "**Conversion Rate**" means the exchange rate quoted in the Wall Street Journal on the last working day of each Calendar Year.

1.13 "**Evaluate**" or "**Evaluation**" or "**Evaluation Purpose**" means examination, research, testing or analysis of Biological Materials for the sole purpose of enabling Licensee to determine whether such Biological Materials are suitable for Commercial Use.

1.14 "**Evaluation License**" means the non-exclusive right to evaluate and use Biological Materials solely for Evaluation Purposes that Are described in Section 1.13, and subject to the terms of this Agreement.

1.15 "**Evaluation License Term**" means the term of the Evaluation License as set forth in the Section 12.1.

1.16 "**Field of Use**" means treatment and prevention of diseases in humans and animals. The Field of Use specifically excludes (i) the use or Sale of ATCC Materials and Modifications for any other purposes other than to develop, make, have made, use, and Sell Licensed Products; (ii) the use, Sale or transfer of Biological Materials for Proficiency Testing Services (as hereunder defined); and (iii) the Sale or transfer of ATCC Materials, Progeny, and Unmodified Derivatives to any Third Party, unless otherwise expressly permitted herein.

1.17 "**Investigational New Drug Application**" or "**IND**" means Investigational New Drug Application as defined in the U.S. Food, Drug and Cosmetic Act and the regulations promulgated thereunder, and any corresponding foreign applications, registration or certification.

1.18 "**Licensed Product(s)"** means preventive or therapeutic vaccines or vaccine components where the development, manufacture, use, or Sale uses or incorporates Biological Materials.

1.19 "**Marketing Authorization**" means a marketing authorization granted by the European Commission for a Licensed Product; or the approval of a BLA by the United States Food and Drug Administration for the same; or any equivalent foreign authorization, registration, or certification.

1.20 "**Material Transfer Agreement**" (**the "MTA**") means the current material transfer agreement, at present dated February 1, 2010, provided to customers by ATCC in the course of its business. A copy of this MTA is available at ATCC's web site (http://www.ATCC.org) and is included in Appendix A of the Agreement.

1.21 "**Modification**" means any material created by, for, or on behalf of Licensee or its Related Parties from the ATCC Materials which contains or incorporates a significant or substantial portion of ATCC Materials.

1.22 "**Party**" means ATCC or Licensee individually; "Parties" means ATCC and Licensee collectively.

1.23 "**Price Index**" means the Producer Price Index – Drugs and Pharmaceuticals – Ethical Preparations (Prescriptions) or any successor thereto, as compiled and published by the U.S. Department of Labor, Bureau of Labor Statistics or any successor agency that assumes responsibility for the preparation of such index.

1.24 "**Proficiency Testing Services(s)"** means (i) a program in which multiple specimens are periodically sent to a group of laboratories for analysis and/or identification; in which each laboratory's results are compared with those of other laboratories n the group and/or with an assigned value and reported to the participating laboratory and others (NCCLS NRSCLS-A, 1998), or (ii) an evaluation of the ability of a laboratory to achieve a correct test result when compared with other laboratories using the same methodology. This is accomplished

using the laboratory's materials, personnel, equipment, environmental conditions, and procedures through the analysis of unknown specimens distrusted at periodic intervals by an external source.

1.25 "**Progeny**" means an unmodified descendant from the ATCC Materials, such as virus from virus, cell from cell, or organism from organism.

1.26 "**Related Party**" shall mean each of the Licensee, its Affiliates, and their respective Sublicensees (which term does not include distributors), as applicable.

1.27 "**Relevant Sales**" shall mean all revenues in any form received by or owing to Licensee and/or its Related Parties from Sales of Licensed Product(s), whether or not assembled (and without excluding therefrom any components or subassemblies thereof, whatever their origin and whether or not patent impacted), less the following items but only insofar as the actually pertain to the disposition of such Licensed Product(s) by I.icensee and/or its Related Parties, are included in such gross revenue, and are separately billed:

a) credits or refunds actually allowed for spoiled, damaged, outdated, or returned goods;

b) sales and other excise tart-s imposed and paid directly ',i-with respect to the Sale-, and

c) transportation costs to the extent separately invoiced.

1.28 "**Sale**" means any transaction that transfers to an arm's-length Third Party purchaser, for value, title and right of physical possession to a Licensed Product. Correspondingly, "**Sell**" means to make or cause to be made a Sale and "**Sold**" to have made or caused to be made a Sale. For the purpose of this agreement, "**Sales**" also means those instances where Licensed Product is not Sold or offered for Sale, but it is otherwise commercially exploited by Licensee or a Related party to obtain a commercial gain.

1.29 "**Sublicensee**" means with respect to a particular Licensed Product, a 'Third party to whom Licensee or its Affiliate has granted (i) a license to develop, make, use or Sell such Licensed Product, or (it) a right or license to market or distribute such licensed product, provided that such Third Party is responsible for some or all of the marketing or promotion of such Licensed Product within such Third Party's portion of the Territory.

1.30 "Territory" means the world.

1.31 "Third Party" means any person or entity that is not a Party to this Agreement.

1.32 "Third Party Contractor(s)" means any person or entity that is not a Party to this Agreement that may be engaged or employed by Licensee for the limited purpose of assisting Licensee in the Evaluation (during the Evaluation License Term) of Biological Materials, and/or in the research, development, and manufacture of the Licensed Product for Licensee's benefit (during the Commercial Use License Term); such engagement and/or employment is outline in the Section 2.2 and is further subject the terms and conditions of this Agreement.

1.33 "**Trademarks**" means all trade name, trademark and service mark rights, whether registered or not, now owned or hereafter acquired by ATCC, and the entire goodwill of the business

of ATCC connected with and symbolized by such marks, including, without limitation, ATCC®, ATCC catalog marks, Your Discoveries Begin with Us®, The Global BioResource Center™, ATCC Licensed Devivative®, ATCC Genuine Product™, ATCC Special Collections™, ATCC Cultures®, ATCC Bioproducts™, AuthenticulrTM, Uniplus®, Express Check TM, ATCC Genuine Cultures®, BioEscrow®, ATCC Standards Resource®, ATCC Reference Material™, ATCC Fungal Allergen Standard™, ATCC Proficiency Standard™, ATCC Standard Reference Material™, and ATCC Services™.

1.34. "**Unmodified Derivative**" means substances created by, for, or on behalf of Licensee or its Related Parties, which constitute unmodified functional subunits or products naturally expressed by the ATCC Materials, such as purified fractionated subsets of the ATCC Material.

ARTICLE 2. LICENSE GRANT

2.1 Subject to the terms and conditions of this agreement, in consideration of the payments due from Licensee to ATCC under Article 4. of the Agreement, as well as the other obligations undertaken by Licensee under the Agreement, ATCC hereby grants, and Licensee hereby accepts the following:.

a) Evaluation License. During the Evaluation License Term, an Evaluation License.

The license granted in this Section 2.1 a) shall be limited to the Evaluation Purposes set forth in Section 1.13. For purposes that are in addition to or other than those set forth in Section 1.13, Licensee has not license under this Agreement during the Evaluation License Term; and any such use of ATCC Materials that falls outside the scope of the Evaluation Purpose during the Evaluation License Term shall be governed by the terms of the MTA.

b) Commercial Use License. Upon termination or expiration or expiration of the Evaluation License, and subject to the receipt of payment of applicable fees set forth in Article 4 a Commercial Use Licensee.

The license granted in this Section 2.1 b) is expressly limited to the methods and products that are within the Field of Use and within the Territory. For other methods and products that are within the Field of Use and within the Territory. For other methods and products, Licensee has no license under this Agreement.

2.2 Subject to the terms and condition set forth in this Agreement, during the Agreement Term, Licensee and its Related Parties may employ and/or engage Third Party Contractors and transfer Biological Material and Confidential Information to such Third Parties, for the limited purpose of assisting Licensee in the Evaluation (during the Evaluation License Term) and also in the research, development, and manufacture of the Licensed Product for Licensee's benefit (during the Commercial Use License Term): provided that:

a. any such transfer, employment and/or engagements shall be subject to a written agreement between Licensee or the applicable Related Party and the Third Party Contractor; wherein ATCC is explicitly stated therein as a third party beneficiary with respect to such agreement and where the Third Party Contractor agrees to

comply with all applicable terms and conditions that are consistent with and no less restrictive than the terms and conditions set forth in Appendix E;

b) ATCC shall have the right to inspect such written agreements, upon request. any such agreements shall be deemed Confidential Information of Licensee and ATCC shall maintain such Confidential Information in confidence in accordance with Article 13, except as may be necessary to enforce its rights hereunder;

c) Licensee shall be responsible to ATCC for all obligations of such Third Party Contractors in the same fashion and to the full extent that Licensee is obligated to ATCC hereunder. A breach of this Agreement by any Third Party Contractor will be treated as a breach of this Agreement, Licensee shall pay all costs incurred in connection therewith, including without limitation attorneys.

2.3 Except in accordance with Section 2.1, Section 2.2 and Article 3, Licensee and its Related Parties are specifically not granted the right to sublicense, distribute, lend, Sell, offer to Sell, or otherwise transfer Biological Materials to any 'Third party and Licensee acknowledges that such action, would constitute a material breach of this agreement.

2.4 ATCC retains ownership rights to ATCC Material, Progeny, Unmodified Derivatives, and ATCC Material, Progeny, and Unmodified Derivatives contained or incorporated in Modifications or Licensed Products. ATCC also retains rights to any intellectual property it owns in ATCC Material. Licensee retains ownership of: (a) Modifications (except that ATCC retains ownership rights to ATCC Material included therein) and (b) those substances created through the use of ATCC Material or Modifications, but which do not contain ATCC Material. If (a) or (b) results from collaborative efforts of ATCC and Licensee, joint ownership may be negotiated by the Parties.

2.5 Neither Licensee, nor its Related Parties shall have any rights in any technologies developed, owned or otherwise controlled by ATCC other than the rights explicitly specified in this Agreement.

2.6 ATCC retains an irrevocable and non-exclusive right to use the ATCC Materials for its own purposes and to grant additional licenses to Third Parties.

2.7 Licensee shall promptly notify ATCC of any quality problems related to (i) the ATCC Materials received pursuant to the MTA and this Agreement; and (ii) the sale of Licensed Products, including all instances in which Licensed Products have been misidentified, contaminated or in which otherwise inauthentic or adulterated Licensed Products have been Sold.

2.8 Licensee Acknowledges that:

THE ATCC MATERIALS ARE NOT INTENDED FOR USE IN HUMANS. LICENSEE AGREES THAT ATCC MATERIALS DESIGNATED AS BIO-SAFETY LEVEL 2 OR 3 CONSTITUTE KNOWN PATHOGENS AND THAT OTHER ATCC MATERIALS NOT SO DESIGNATED AND ANY PROGENY OR MODIFICATIONS MAY BE PATHOGENIC UNDER CERTAIN CONDITIONS LICENSEE ASSUMES ALL RISK AND RESPONSIBILITY IN CONNECTION WITH THE RECEIPT, HANDLING, STORAGE, DISPOSAL, TRANSFER AND USE OF THE ATCC MATERIALS INCLUDING WITHOUT LIMITATION TAKING ALL APPROPRIATE SAFETY AND

HANDLING PRECAUTIONS TO MINIMIZE HEALTH OR ENVIRONMENTAL RISK. LICENSEE AGREES THAT ANY ACTIVITY UNDERTAKEN WITH THE ATCC MATERIALS AND ANY PROGENY OR MODIFICATION WILL BE CONDUCTED IN COMPLIANCE WITH ALL APPLICABLE GUIDELINES, LAWS AND REGULATIONS.

2.9 The licensees granted pursuant to this Agreement are not a purchase order of the ATCC Material, and the licensing fees set forth in Article 4 are not an advance or payment for the purchase of ATCC Material. Licensee understands and agrees that upon execution of this Agreement, and in addition to the license fees paid pursuant to Article 4, if Licensee desires to acquire ATCC Material. Licensee will be required to place a purchase order with ATCC or applicable distributor, customer service representation for the acquisition of the ATCC Materials.

ARTICLE 3. SUBLICENSES

3.1 Subject to the terms and conditions set forth in this Agreement, Licensee and its Affiliates shall have the right to grant sublicenses to Third Parties or develop, make, use and Sell Licensed Products in the Territory and in the Field of Use provided that:

a) any sublicense granted shall be subject to a written sublicense agreement between Licensee or its respective Affiliates, and the Sublicense;

b) ATCC is explicitly stated I such written sublicense agreed as a third party beneficiary with respect to any such agreement;

c) each Sublicense has agreed in the written sublicense agreement to be bound by all applicable terms, conditions, obligations (including payments, reporting, and inspections) and other restrictions of the rights granted by ATCC to Licensee under this Agreement that protect or benefit ATCC's rights and interests;

d) the terms and conditions of each such agreement are consistent with and not less restrictive than the terms and conditions of this Agreement; and,

e) Licensee identifies any and all Sublicensees, including any Sublicensees of its Affiliates, to ATCC.

3.2 For the avoidance of doubt, neither Licensee nor its Affiliates shall have the right to sublicense the ATCC Material, Progeny, or Unmodified Derivatives except to the extent they are incorporated I the Licensed Products. Licensee shall have no right to permit any Sublicensee to further sublicense any f the right granted to Licensee hereunder, unless ATCC, in its sole discretion, agrees in writing to such a sublicense or unless such further sublicense is restricted to the manufacture and Sales of Licensed Products, such agreement will not be unreasonably withheld.

3.3 Licensee shall be responsible to ATCC for all obligations of its Related Parties in the same fashion and to the full extent that Licensee is obligated to ATCC hereunder. A breach of this Agreement by any Related Party will be treated as a breach by Licensee. If ATCC brings suit

against a Related Party for breach of this Agreement, Licensee shall pay all reasonable costs incurred in connection therewith, including without limitation attorney's fees and disbursements. In the event of an uncured breach by any Sublicensee then Licensee shall terminate such sublicense or other agreement with Licensee's Sublicensee and shall promptly provide ATCC with written notification of said termination.

3.4 Licensee shall notify ATCC of each sublicense granted hereunder and shall provide ATCC with a complete copy of each sublicense within thirty (30 days of issuance of such sublicense. Any such sublicense shall be deemed Confidential Information of Licensee and ATCC shall maintain such Confidential Information in confidence in accordance with Article 13, except as may be necessary to enforce its rights hereunder.

3.5 Upon expiration or termination of this Agreement for any reason, all sublicenses to rights granted to the Licensee and its Affiliates hereunder, shall automatically terminate, unless ATCC, at its sole discretion, agrees in writing to an assignment to ATCC of any sublicense, ATCC shall not be bound to any duties under an assigned sublicense beyond ATCC's duties under this Agreement. Upon Licensee's request, at any time during the Agreement Term, ATCC agrees to meet and confer with Licensee and/or Licensee's Affiliates and their respective Sublicensees (or potential Sublicensees) to discuss what assurances ATCC might give to the Sublicensees that the subject Sublicensees shall not be terminated upon termination of this Agreement, To the extent that ATCC is willing to give such assurances, ATCC agrees that it shall enter into a written agreement with Licensee or its Affiliates, if applicable, and such Sublicensees regarding setting forth ATCC's assurance and the ATCC's agreement not to require termination of the sublicense.

ARTICLE 4. LICENSE FEES

4.1 In consideration of the rights granted to Licensee under this Agreement, Licensee agrees to make the following payments to ATCC during the Agreement in accordance with the following provisions:

a) Fees related to the Evaluation License:

i. **Evaluation License Fee.** Licensee shall make a one-time payment to ATCC in the amount of Five Thousand ($5.000) within thirty (30) days after the Effective Date of this Agreement.

ii. **Evaluation License Renewal Fee**. If licensee exercises its option(s) to renew the Evaluation License Term pursuant to Section 12.1 of this Agreement, then Licensee agrees to pay ATCC a renewal payment in the amount of Five Thousand Dollars ($5,000) for each such twelve month renewal. ATCC shall submit an invoice upon receipt of notice of such renewal(s), and such invoice shall become payable within thirty (30) days of receipt by Licensee.

b) Fees related to the Non-Exclusive Commercial Use License:

i. **Commercial Use License Initial Fee**. Licensee shall pay ATCC an one-time payment in the amount of [XXXX] ("Initial Fee"). Such payment shall be made no later than thirty (30) days after the expiration of the

Evaluation License Term; provided, however, that any fees paid pursuant to Section 4.1(a) shall be credited towards and applied to the Initiation Fee. Such payment shall be made no later than thirty (30) days after the expiration or termination of the Evaluation License.

ii. **Royalty on Relevant Sales**. An earned annual royalty at the rate of [XXXX] based on the Relevant Sales of Licensed Products by Licensee and /or its Related Parties, such payment to be made on or before January 15 (for the Calendar Year) of each year.

iii. **Milestone Payments.** Licensee shall owe milestone payments o a Licensed Product by Licensed Product basis to ATCC upon the first occurrence of each event specified below. Each such milestone payment shall be payable by the Licensee to ATCC from the Effective date throughout the Agreement Term and shall be made on or before thirty 30) days following the month in which each of the following events occur:

Initiation of each Phase I Clinical Trial	[XXXX]
Initiation of each Phase II Clinical Trial	[XXXX]
Initiation of each Phase III Clinical Trial	[XXXX]
Marketing Authorization	[XXXX]

iv. **Additional Material.** In the event Licensee is granted approval to add additional ATCC Material toAppendix D as provided in Section 1.2 herein, Licensee will pay an additional licensing fee to ATCC in the amount of Five Hundred Dollars ($500) for each additional ATCC Material, such payment to be made within thirty (30) days after ATCC notifies Licensee of such approval.

4.2 All payments shall be made in Untied States dollars and annually adjusted for inflation based on the Price Index. Conversion of foreign currency to United States dollars shall be made at the Conversion Rate. Such payments shall be without deduction of exchange, collection or other charges. Licensee shall be responsible for any taxes, duties, remittance and permit fees and such payments shall not be deducted from payments due to ATCC; provided, however, that Licensee shall not be responsible for any income or franchise taxes imposed on (or measured by) ATCC's net income by (i) the United States, (ii) by any state or local jurisdiction within the United States or (iii) by any other jurisdiction in which ATCC has a

principal office. If any such withholding is so required by law, Licensee shall withheld the prescribed amount, pay the amount withheld to the appropriate governmental authority before penalties attach thereto or interest accrues thereon and immediately pay such additional amount as may be necessary to ensure that the net amount actually received by ATCC free and clear of such taxes is equal to the amount that ATCC would have received had such withholding not been required.

4.3 Payments are non-refundable and are not an advance or, except as specified herein, otherwise creditable against any other payments required to be paid under the terms of this Agreement. Licensee will bring any claims or causes of action it may have in a separate actions and wives any right it may have to offset, setoff, or withhold payment from ATCC.

Check sent to the following address	Domestic money wire transfer to:	International money wire transfer to:
ATCC 5779 Collections Center Drive Chicago, IL 60693 USA CASE NUMBER: SCL-00276	Account # 0xxxxxxxxxx2 ABA # 0xxxxxxx3 Bank of America Baltimore, MD USA CASE NUMBER: SCL-00276	Account # 0xxxxxxxxxx2 ABA # 0xxxxxxx3 SWIFT Code BOFAUS3N Bank of America 100 West 33rd Street New York, NY 10001 USA CASE NUMBER: SCL-00276

4.5 Late payments shall be subject to a charge of one and one-half percent (1.5%) per month, the interest being compounded annually, or two hundred fifty dollars ($250.00), whichever is greater. Such interest will be calculated from the date payment was due until actually received by ATCC. Such accrual of interest will be in addition to, and not in lieu of, enforcement of any other rights of ATCC due to such late payment.

ARTICLE 5. PROGRESS AND SALES REPORTS

5.1 All progress and sales reports that are required under this Article 5 shall be deemed Confidential Information of Licensee, and ATCC shall maintain such Confidential Information in confidence in accordance with Article 13, except as may be necessary to enforce its rights hereunder.

5.2 Beginning January 15, 2012 and annually thereafter, the Licensee shall submit to ATCC a written progress report as described in 5.2 and Appendix B covering the Licensee's and its Related Party's activities related to the development and testing of all Licensed Products and the obtaining of the necessary permits and government approvals for marketing and commercialization of the Licensed Products. Progress reports are required for each Licensed Product until the first Sale or commercial exploitation of the first Licensed Product occurs and shall be again required if sales of such Licensed Products are suspended or discontinued for more than six (6) months.

5.3 Progress reports shall include but are not limited to, the following topics for each of Licensee and is Related Parties:

a) summary of work completed as of the submission dare of the progress report;

b) summary of work in progress as of the submission dace of the progress report;

c) commercialization forecast, including anticipated market introduction dates of all Licensed Products; and

d) activities of the Related Parties as of the submission date of the progress report.

5.4 Licensee shall notify ATCC of the first Sale or commercial exploitation of a Licensed Product in the Territory; such notification shall be made thirty (30) days prior to the relapse of said Licenses Product for Sale.

5.5 Commending with the first Sale or other exploitation of the Licensed Products by Licensee and/or its Related Parties, Licensee shall provide a full accounting showing how any amounts owed to ATCC under Article 4 have been calculated and such annual royalty reports shall be submitted to ATCC on or before the dates payments are due under Section 4.1). Such accounting shall be on a per-country and product line, model or trade name basis and shall be summarized on the form shown in Appendix C of this Agreement. As shown in Appendix C, the annual royalty report will consist of one report per product line and then a summary report that consolidates the results of all the product lines. In the event no payment is owed to ATCC, a statement setting forth the fact shall be supplied to ATCC giving the reasons why royalties are not owed for the period.

5.6 Each royalty report shall cover the Licensee's and its Related Parties' most recently completed Calendar Year and shall include, but are not limited to, the following items;

a) the Relevant Sales of Licensed Products Sold or otherwise exploited (itemizing the gross proceeds and any deductions therefrom);

b) the quantity of each type of Licensed Product Sold or otherwise exploited;

c) the county in which each Licensed Product was made, used, Sold or otherwise exploited by Licensee and/or its Related Parties;

d) the royalties, in United States Dollars, payable to ATCC with respect to Relevant Sales;

e) any other information reasonably necessary to confirm Licensee's calculation of its royalty payments, such as, by way of non-limiting example, the applied Conversion Rate.

5.7 If the Licensee fails to submit a timely progress of sales report to ATCC, ATCC will be entitled to give notice and terminate the Agreement in accordance to Section 12.5. If either Party terminates the Agreement before any Licensed Products are Sold, then a final progress report covering the period prior to termination must be submitted within thirty (30) days of termination.

ARTICLE 6. RECORDS AND INSPECTIONS

6.1 ATCC shall provide to Licensee, upon request, available records related to the accessioning, manufacture, preservation, storage and handling of ATCC Materials as may be required by Licensee for its regulatory filings.

6.2 Licensee shall maintain, and shall cause its Related Parties to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to ATCC in relation to this Agreement, which records shall contain amounts payable to ATCC in relation to this Agreement, which records shall contain amounts payable to ATCC in relation to this Agreement, which records shall contain sufficient information to permit ATCC to confirm the accuracy of any reports delivered to ATCC and compliance I other respects with this Agreement. The relevant party shall retain such records for at least five (5) years following the end of the Calendar Year to which they pertain.

6.3 During the Agreement Term and for a period of two (2) years thereafter, ATCC or its representatives shall have the right to inspect, and make copies and abstracts of, the books and records of the Licensee in conjunction with the performance of Licensee's obligations under the terms and conditions of this Agreement. The scope of such audit and inspection activities may include the review of records supporting activities performed by Licensee and its Related Parties in conjunction with its obligations under this Agreement, as well as processes and related process internal controls and support systems, the quality and accuracy of which are directly related to the performance of Licensee's and it Related Parties' obligations under the terms and conditions of this Agreement. Licensee agrees to provide representatives of ATCC reasonable access to books, records, systems and processes, and shall cooperate fully with the ATCC's representatives in support of their inspection and audit activities during Licensee's normal business hours.

6.4 If a payment deficiency is reasonably established by such audit, Licensee shall pay the outstanding amounts within thirty (30) days of receiving written notice thereof, plus interest on such outstanding amounts as described in Section 4.5.

6.5 ATCC will pay for any audit done under Article 6. However, in the event that the audit reveals an underpayment of royalties or fees by more than five percent (5%) for the period being audited, the cost of the audit shall be paid by Licensee within thirty (30) days of receiving written notice of such underpayment. If the underpayment is less than five Percent (5%) but more than two percent (2%_ for the period being audited, Licensee and ATCC shall each pay fifty percent (50%) of the cost of the audit.

6.6 ATCC and its representatives or agents shall treat as confidential under Section 13.1 all information concerning notifications, license fees, reports, and all information learned in the course of any audit or inspection, except to the extent necessary for ATCC to revel such information in order to enforce its rights under this Agreement or as may be required by law.

ARTICLE 7. PATENTS, TRADEMARKS AND NAMES

7.1 Licensee shall notify in writing of any allegations, claim or suit by a Third Party that the activity of Licensee or its Related Parties in connection with the ATCC Materials infringes or many infringe the intellectual property rights of such Third Part promptly upon

Licensee becoming aware of such allegation, claim or suit, so that ATCC may decide whether to participate in or undertake the defense of any legal proceedings.

7.2 ATCC represents, to the best of its knowledge, that no patent or patent application presently owned or licensed by ATCC as of the Effective Date (the "ATCC Patents") would block Licensee or its Related Parties from practicing the license granted herein. ATCC herby covenants that, during the Agreement Term and thereafter, it will not bring an action for patent infringement against Licensee or its Related Parties based on any ATCC Patents in respect of Licensee's and/or its Related Parties activities licensed hereunder during the Agreement Term.

7.3 Except as set forth in Section 7.5, neither Licensee nor its Related Parties shall use the names of ATCC, nor of any ATCC employees in connection with this Agreement without prior written approval from an authorized representative of ATCC. ATCC shall not use the names of either Licensee or its Related Parties, or any of their respective employees in connection with this Agreement without prior written approval for an authorized representative of Licensee or the applicable Related Party.

7.4 Licensee and it Related Parties shall assign their own catalog numbers or functionally equivalent identifiers to all Licensed Products, and those catalog numbers or identifiers shall be the primary means by which customers shall order Licensed Products from Licensee or it Related Parties.

7.5 Notwithstanding the prohibition in Section 7.3, Licensee and its Related Parties may identify a Licensed Product as having been manufactured or tested using ATCC Materials licensed from ATCC, so long as such identification is accompanied by the respective ATCC catalog number and all references to ATCC use the phrase "The ATCC trademark and trade name and any and all ATCC catalog numbers are trademarks of the American Type Culture Collection" in close proximity. Neither Licensee nor its Related Parties may identify ATCC or use the ATCC Trademark or logos in any other context. By way of nonlimiting example, Licensee may state in a certificate of analysis, its published catalog or in a Federal Drug Administration Drug Master File that the Licensed Product was tested or made using the ATCC Materials identified with the applicable catalog numbers set forth in Appendix D, e.g., ATCC#CRL-1420™.

7.6 Licensee explicitly recognizes that all Trademarks are the exclusive property of ATCC.

7.7 In all cases in which Licensee or its Related Parties identify ATCC or uses ATCC's name or Trademarks in connection with Licensed Products, Licensee and its Related Parties shall also indicate in all of its or its Related Parties' advertising packaging, brochures, literature and communications containing such reference that the identity, purity and authenticity of Licensed Products Sold by Licensee or its Related Parties are exclusively Licensee's or the applicable Related Parry's responsibility and not the responsibility of ATCC, and that ATCC has no responsibility or liability for Licensed Products.

7.8 Licensee and its Related Parties shall use reasonable diligence to assure the accuracy of any representation to its customers that Licensed Products are derived, or manufactured from or contain ATCC Materials and will promptly correct any failures in this regard.

ARTICLE 8. COMMERCIAL AND COMMERCIAL ACTIVITIES

8.1 As between ATCC and Licensee, Licensee shall be solely responsible, and shall bear the full cost and expense, for the development, governmental approval, manufacturing, marketing, use and Sale of Licensed Products.

8.2 As between ATCC and Licensee, Licensee shall alone have the obligation to ensure that any Licensed Products developed, made, used, or Sold by Licensee or its Related Parties are not defective and that any Licensed Product and any conduct of Licensee and its Related Parties with respect to Licensed Products satisfies all applicable government laws and regulations.

8.3 Licensee shall comply with, and shall contractually obligate its Related Parties to comply with, all Untied States laws and regulations controlling the export and re-export of certain commodities and technical data, including without limitation all Export Administration Regulations of the United States Department of Commerce (as presently promulgated or hereinafter modified or amended). Licensee bears sole responsibility for any violation of such laws and regulations by itself or its Related Parties, and it will indemnify, defend and hold ATCC harmless (in accordance with Section 9.1) for the consequences of any such violation.

8.4 Licensee shall obtain, and shall contractually obligate its Related Parties to obtain, all authorities, consents and clearances required for the purchase, importation, exportation transportation, distribution, demonstration and Sale of Licensed Products to and within the Territory. Licensee shall comply with, and shall contractually obligate its Related Parties to comply with, all applicable foreign and domestic, federal, state and local statutes, ordinances and regulations.

8.5 Licensee and its Related Parties shall receive, store, handle and ship the Biological Materials and the Licensed Products under procedures which will ensure that there is no degradation of the quality thereof or in their packaging, or appearance, and shall maintain adequate facilities for the receipt, storage, handling and shipment of Biological Materials and Licensed Products.

8.6 Licensee and its Related Parties shall conduct their business in a manner that will reflect favorably on ATCC and the reputation of ATCC and its products, and avoid any deceptive, misleading, or unethical practice that is or might be detrimental to the reputation and good name of ATCC and its products.

ARTICLE 9. INDEMNIFICATION AND INSURANCE

9.1 Licensee hereby indemnifies ATCC, its officers, agents and employees, and agrees to hold them harmless from and against any and all liability, damage, loss or expense (including reasonable attorneys' fees) arising from any claim, demand, action or proceeding based upon any action or omission of Licensee or any of its Related Parties in connection with this Agreement, including, but not limited to:

a) The use, manufacture, marketing, Sale, storage, demonstration or advertising of a Licensed Product by Licensee or any of its Related Parties;

b) The final consumer's use of a Licensed Product purchased, or otherwise acquired from Licensee or any of its Related Parties;

c) a Third Party's manufacture of a Licensed Product at the request of Licensee or any of its Related Parties; and

d) any act or omission of Licensee, its employees, Related Parties or any other Third Party acting on behalf of or under authorization from licensee in the performance of this Agreement;

or incurred in the settlement or avoidance of any such claim, demand, action or proceeding. ATCC shall have the right to select counsel and control the defense thereof, subject to right of the Licensee to participate therein. Licensee further agrees to indemnify ATCC, its officer, agents and employees and agrees to hold them harmless from and against, any loss, damage, claim, expense or liability, including but not limited to attorney's fees, resulting from any property damage, personal injury or death arising out of or in connection with the acts of the officers, agents or employees of Licensee and/or its Related Parties while performing duties under this Agreement. ATCC shall not agree to any settlement relating to any claim, demand, action, or proceeding by a Third party in connection with this Agreement without the express written consent of Licensee.

9.2 Licensee shall maintain and shall cause its Related Parties to maintain, during the Agreement Term and for five (5) years after Licensee and its Related Parties cease Selling Licensed Products, comprehensive General Liability Insurance including Products/Complete Operation coverage in an amount no less than five million dollars ($5,000.000) and Professional Errors and Omissions Liability Insurance in an amount no less than five million dollars ($5,000.000) with reputable and financial secure insurance carrier(s) to cover all claims against liability arising out of the manufacture, distribution, handling, use or sale of Licensed Products, and shall name ATCC as an additional insured and shall provide to ATCC a certificate of such insurance on the first anniversary of the Effective Date and also promptly upon ATCC's request.

ARTICLE 10. WARRANTIES AND LIMITATIONS

10.1 ATCC WARRANTS THAT ATCC MATERIALS SHALL BE VIABLE UPON SHIPMENT FROM ATCC FOR A PERIOD OF THIRTY (30) DAYS ("**WARRANTY PERIOD**"). ATCC WARRANTS THAT ANY ATCC MATERIAL PROVIDED BY IT SHALL MEET THE SPECIFICATIONS ON THE PRODUCT INFORMATION SHEET, CERTIFICATE OF ANALYSIS, AND/OR CATALOG DESCRIPTION UNTIL THE EXPIRATION DATE ON THE PRODUCT LABEL. THE EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY IS, AT ATCC'S OPTION, (A) REFUND OF THE FEE PAID TO ATCC FOR SUCH ATCC MATERIALS (EXCLUSIVE OF SHIPPING AND HANDLING CHARGES), OR (B) REPLACEMENT OF THE ATCC MATERIALS. THE EXCLUSIVE REMEDY APPLIES UNDER THE CONDITION THAT LICENSEE AND ITS CUSTOMER HANDLES AND STORES ATCC MATERIALS AS DESCRIBED IN THE PRODUCT SHEET. TO OBTAIN THE EXCLUSIVE REMEDY, LICENSEE MUST REPORT THE LACK OF VIABILITY TO ATCC'S TECHNICAL SERVICE DEPARTMENT WITHIN THE WARRANTY PERIOD. ANY EXPIRATION DATE SPECIFIED ON

THE ATCC MATERIALS SHIPMENT DOCUMENTATION STATES THE EXPECTED REMAINING USEFUL LIFE, BUT DOES NOT CONSTITUTE A WARRANTY OR EXPEND ANY APPLICABLE WARRANTY PERIOD. THIS WARRANTY SHALL BE VOIDED ONCE LICENSEE USES, MODIFIES OR REPLICATES ANY ATCC MATERIALS.

10.2 EXCEPT AS EXPRESSLY PROVIDED ABOVE THE ATCC MATERIAL, ANY OTHER ATCC PRODUCTS, AND ANY TECHNICAL INFORMATION AND ASSISTANCE PROVIDED BY ATCC ARE PROVIDED "AS IS", WITHOUT WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, MANUFACTURE ACCORDING TO GMP STANDARDS, TYPICALITY, SAFETY, ACCURACY AND NON-INFRINGEMENT.

10.3 IN NO EVENT SHALL ATCC, ITS DIRECTORS, OFFICERS, AGENTS, EMPLOYEES AND AFFILIATES (collectively "ATCC INDEMNIFIED PARTIES") BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT (WHETHER IN CONTACT, TORT, NEGLIGENCE, STRICT LIABILITY, STATUTE OR OTHERWISE) EVEN IF ATCC HAS BEEN ADVISED, KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS COST OF CAPITAL, COST OF SUBSTITUTE PRODUCTS OR CLAMS OF LICENSEE'S CUSTOMERS FOR SUCH DAMAGE. IN NO EVENT SHALL ATCC'S CUMULATIVE LIABILITY EXCEED THE ACTUAL AMOUNTS PAID NY LICENSEE UNDER THIS AGREEMENT FOR THE TWELVE (12) MONTH PERIOD PRECEDING THE DATE OF THE EVENT GIVING RISE TO THE CLAIM THE PROVISIONS OF THIS SECTION SHALL SURVIVE THE EXPIRATION OR TERMINATION OF THIS AGREEMENT AND SHALL APPLY EVEN IF THE LIMITED REMEDY SPECIFIED IN THE AGREEMENT IS FOUND TO HAVE FAILED OF ITS ESSENTIAL PURPOSE.

ARTICLE 11. COMPLIANCE WITH LAWS

11.1 Licensee hereby certifies, and shall contractually obligate its Related Parties to certify, that Licensee and its Related Parties to certify, that Licensee and its Related Parties, applicable, shall (1) ensure that only qualified personnel work with Biological Material in proper facilities; (2) provide sufficient internal security to assure access to Biological Material only by those individuals authorized to work with the; (3) not transfer, export, resell, or otherwise dispose of any Biological Material to any Third Parties under any circumstances without written authorization by ATCC and the appropriate government agencies or as explicitly provided for within the Agreement; (4) not permit access to Biological Materials by foreign entities or individuals when to do so would be in violation of export control laws; (5) comply with all applicable federal, state or local laws and regulations pertaining to Biological Material or their handling, storage, use transportation; and (6) unless requested otherwise by ATCC, destroy all Biological Material according to accepted practices for destruction of biohazardous material upon expiration or termination of this Agreement as set forth in Article 12.

ARTICLE 12. TERM AND TERMINATION

12.1 Evaluation License Term. The term of the Evaluation License shall be twelve(12) months from the Effective Date of this Agreement. Subject to the payment of any consideration due under Section 4. Of this agreement, Licensee may renew the Evaluation License term up to two (2) times by providing ATCC written notice of its renewal request within thirty (30) days prior to the expiration of the preceding Evaluation License tern. Notwithstanding the forgoing, the Evaluation License shall under all circumstances terminate immediately upon submission of an Investigational New Drug Application.

12.2 Commercial Use License Term. Subject to the receipt of payment of the applicable fees set forth in Article 4, the Commercial Use License Term will begin immediately upon the termination or expiration of the Evaluation License, and it will continue until the termination or expiration of this Agreement.

12.3 Agreement Term. This Agreement will remain in full force and effect for forty (40) years from the Effective Date of this Agreement, unless earlier terminated under this Article 12.

12.4 Unless earlier terminated under this Article 12, Licensee may terminate the Evaluation License granted in Section 2.11 and the Commercial Use License granted in Section 2.2 under this Agreement at any time upon sixty (60) days written notice to ATCC, subject to the payment of any consideration due.

12.5 This agreement may be terminated by written notice to the other Party, if a Party materially breaches a material provision of this Agreement and has failed to cure or demonstrate the nonexistence of the breach within sixty (60) days of receipt of a written notice and demand to cure such breach. For the avoidance of doubt, ATCC may automatically terminate this Agreement if, within sixty (60) days written notice to Licensee, Licensee fails to cure the following circumstances:

a) if any payment due ATCC is unpaid under this Agreement;

b) if Licensee (i) fails to provide a progress or sales report or (ii) provides any false progress or sales reports; or

c) If Licensee fails to terminate a sublicense to a Sublicense after said Sublicensee materially breaches a material provision of the sublicense, and fails to cure such breach within a reasonable time.

12.6 This Agreement may be terminated by ATCC by it providing written notice to the Licensee, with effect immediately, if

a) either Licensee becomes insolvent under local law, makes a general assignment for the benefit of creditors, is adjudicated a bankrupt or insolvent, files a voluntary petition in bankruptcy or for a reorganization or to effect a plan or other petition against it for an adjudicated in bankruptcy or thereof, or applies for or permits the appointment of a receiver, trustee, or custodian for any substantial portion of its properties or assets; or

b) if an order is entered by any court approving an involuntary petition seeking reorganization of Licensee, or appointing a receiver, trustee or custodian for any substantial portion of its assets or business.

12.7 Upon expiration of the Evaluation License under Section 12.1, or upon termination of this Agreement during the Evaluation License Term, as provided in Section 12.4, all terms and conditions set forth this Agreement shall thereafter be governed by the provision of the MTA.

For clarification, this Section shall apply only to expiration or termination of this Agreement during the Evaluation License Term and prior to the commencement of the Commercial Use License granted pursuant to Section 2.1(b). If this Agreement is terminated pursuant to Section 12.4 at any point on or after the date the Commercial Use License has been granted, then this Section 12.7 shall not apply.

12.8 Upon expiration of the Commercial Use License under Section 12.2, or upon termination of this Agreement during the Commercial Use License Term, as provided in Section 12.4, Licensee shall within a period of three (3) months after the date of such expiration or termination, cease all use and destroy all stocks of Biological Material and Licensed Products, and shall provide ATCC with written notification of that fact: provided, however, that Licensee may Sell any Licensed Products actually I the possession of Licensee during such three (3) month period, so long as Licensee continues to submit any records and reports as required in Article 6, and pays to ATCC all fees due under this Agreement, and otherwise continues to comply with the terms of this Agreement. Licensee shall not otherwise develop, make, use, or Sell Licensed Products after the expiration of the three (3) month period.

For clarification, this Section shall apply only to expiration or termination of this Agreement during the Commercial Use License Term granted pursuant to Section 2.1(b). If the Agreement is terminated prior to the date of commencement of the Commercial Use License granted in Section 2.1(b), then this Section 12.8 shall not apply.

12.9 Upon terminate of this Agreement by ATCC for reason of Licensee's breach as provided in Section 12.5 or as provided in Section 12.6, Licensee shall immediately cease all use and destroy all stocks of Biological Material and Licensed Products and shall provide ATCC with written notification of that fact. Licensee shall not otherwise Evaluate, develop, make, use, or Sell Licenses Products after the date of such termination.

12.10 The exercise by either Party of any remedy under this Agreement will be without prejudice to its other remedies under this Agreement or otherwise.

12.11 Obligation to pay to ATCC the applicable license fees set forth in Article 4 shall survive the termination or expiration of this Agreement for as long as Licensee and its Related Parties (i) receive any payment, license revenue, income, royalty, or any other valuable or monetary consideration or (ii) hold any equity, or warrants or interest in and from any joint venture or Third Parties in consideration for any Sale, sublicense or any other exploitation of Licensed Products granted under Article 2.

12.12 Termination or expiration of this Agreement for any reason shall not relieve the Parties of any rights and obligations set forth in Sections 2.4, 3.3, 6.2, 6.4, 10.3, 12.5, 12.11, 15.8 through 15.11, Article 9, Article 13, and all definitions related thereto.

ARTICLE 13. CONFIDENTIALITY

13.1 ATCC Licensee and its Related Parties shall use reasonable efforts (which shall be at least as great as the efforts it uses to maintain the confidentiality of its own Confidential Information) to maintain the confidentiality of the negotiated terms of this Agreement and any Confidential Information. the receiving party can use the disclosing party's Confidential Information to exercise its rights and perform its obligations under this Agreement (including, without limitation, the right to use and disclose such Confidential Information in regulatory applications and filings), unless otherwise mutually agreed in writing. The foregoing obligations of confidentiality shall survive expiration or termination of this Agreement for a period of five (5) years after the effective date of expiration or termination.

13.2 Except as required by law, regulation or court order, and, in the case of ATCC, except as may be required in order to maintain its status as an exempt organization under Section 501(c)(3) of the United States Internal Revenue Code and regulations thereunder, neither ATCC nor Licensee nor its Related Parties shall originate any publicity, news release, or other public announcement relating to the ATCC Materials, this Agreement, or to any amendment thereto or to performance hereunder or the existence of an arrangement between the Parties (a "Public Announcement"), written or oral, whether to the public or the press, to stockholder, or otherwise, without prior written approval of the other Party with regard to the form, content and precise timing of such Public Announcement. Approval of Public Announcement must first be submitted to the other Party for its review and approval in sufficient time to enable the other Party to consider and comment thereon. Nothing herein shall be construed to prevent Licensee or its Related Parties from disclosing the name, source, and use of ATCC Materials in patent applications, documents filed before regulatory authorities involved in the marketing approval of drugs or biologics, or scientific publications or presentations. Nor shall anything herein be construed to prevent Licensee of its Related Parties from issuing any publicity, new release, or other public announcement relating to Licensed Products, wherein such publicity, new release, or other public announcement does not mention ATCC.

13.3 Upon expiration or termination of this Agreement, or at any time upon the written request of ATCC, Licensee and its Related Parties immediately shall (i) cease using the Confidential Information disclosed by ATCC, (ii) return any Confidential Information disclosed by ATCC, and (iii) destroy any notes or personal memoranda which includes or make reference to such Confidential Information or redact such information from such material.

ARTICLE 14. NOTICES

14.1 For purposes of mailings of notices, payments, reports, or other communications, the addresses of the Parties are given below:

In the case of ATCC:

Director of Licensing & Intellectual Property
IP, Licensing & Services
American Type Culture Collection
10801 University Boulevard
Manassas, VA 20110-2209 USA
Fax: 703-334-2932

In the case of Licensee:

Jeff Wolf, Chief Executive Officer
Heat Biologics, Inc.
119 Washington Avenue, Suite 401
Miami Beach, FL 33139

14.2 Notices shall be deemed properly given if delivered to the above location (or such other location as a Party may specify pursuant to a notice under this Section 14.2) by (a) certified mail, return receipt requested, (b) facsimile with a written confirmation copy (c) hand delivery, or (d) nationally recognized courier service.

14.3 All communication regarding this Agreement shall be in the English language, with exception to official documents that shall be mailed in their original language accompanied by a notarized translation to English.

ARTICLE 15. GENERAL PROVISIONS

15.1 Terms in the Agreement that appear in all capital letters, other than the names of the Parties and article headings, have meanings as defined under Article 1, unless separately defined in the body of Articled 2 through Article 15.

15.2 Article headings are inserted in this Agreement for convenience of reference only and no construction, meaning, interpretation or inference shall be derived from them.

15.3 This Agreement is not assignable by Licensee except with the prior written consent of ATCC unless being assigned to corporate successor of Licensee or assigned o a person r entity acquiring all or substantially all of the business and assets of the division or divisions of Licensee involved in the development and Sale of Licensed Products. Notwithstanding the foregoing, ATCC may assign its rights hereunder; provided, however, that such assignment of ATCC's rights hereunder shall be subject to all of the terms of this Agreement.

15.4 No term or provision of this Agreement shall be waived and no breach excused unless such waiver for consent shall be in writing and signed by an authorized representative of each of the Parties hereto. No waiver of a breach shall be deemed to be a waiver of a different or subsequent breach. Failure by either Party to enforce, or a delay in exercising, or a partial exercise of any covenants or rights or remedies under this Agreement shall not be deemed or construed as a waiver of such rights, nor shall waiver by either Party in one or more instances be construed as constituting a continuing waiver or as a waiver in other or subsequent instances.

15.5 This Agreement may not be modified, changed or terminated orally. No change, modification, addition or amendment shall be valid unless in writing and signed by an authorized representative of each of the Parties hereto.

15.6 In the event any term or provision of this Agreement is determined to be invalid or unenforceable, the remaining provision shall remain in full force and effect.

15.7 Neither Party shall be held liable or responsible to the other Party nor be deemed to have defaulted under or breached this agreement for failure or delay in fulfilling or performing any term of this Agreement (except as regards payment obligations) when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party (hereinafter, a **Force Majeure Event**), including but not limited to (i) any law, regulation, order, rule, direction, priority, seizure, allocation, requisition, or any other official actions by any department, bureau, board, administration, or other instrumentality or agency of any government or political subdivision thereof having jurisdiction over such Party; or (ii) fire, floods embargoes, war, acts of war (whether war be declared or not), insurrections acts of terrorism, riots, civil commotions, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority (including regulatory and advisory bodies). Upon the occurrence of any Force Majeure Event, the affected Party shall give written notice of such event to the other Party, and in the event of (ii) above shall use reasonable efforts to overcome such Force Majeure Event.

15.8 The status of each Party under this Agreement is that of an independent contractor, and neither Party has the right or authority to assume or create any obligation accept legal process, make commitments, incur any charges or otherwise bind or act on behalf of the other or limit the other in any manner whatsoever, except as expressly stated herein. Neither this Agreement nor any act hereunder shall be construed as constituting the foundation of a partnership, association, agency, joint venture or any other entity.

15.9 Any dispute arising under this Agreement (other than a dispute involving a claim for injunctive or equitable relief) shall be resolved as follows:

a) ATCC and Licensee, through appropriately senior persons, shall first meet and attempt to resolve the dispute in face-to-face or telephonic negotiations. This meeting shall occur within thirty (30) days of the time that one Party notifies the other in writing of the existence of such dispute.

b) If no resolution is reached, ATCC and Licensee shall, within forty-five (45) days of the first meeting, attempt to settle the dispute by formal mediation. If the parties cannot agree upon a mediator and the place of the mediation, the mediation shall be administered b the American Arbitration Association in Manassas, Virginia, if available, or, otherwise in Prince William County, Virginia.

c) If no resolution is reached within forty-five (45) days of the initiation of the mediation, the dispute shall be resolved by binding arbitration before a panel of three arbitrators (one arbitrator chosen by each of the Parties and the third arbitrator chosen by the first two, unless the parties agree otherwise), at least one of whom shall have a minimum of five (5) years of experience in the field of biotechnology or pharmaceutical product for patent licensing, and shall be under the jurisdiction of, administered by and in accordance with the rules of the American Arbitration Association. The venue for the arbitration shall be in Manassas, Virginia. In no event shall punitive or exemplary damages be awardable. The arbitrators shall have the authority to grant specific performance and to allocate between the Parties the costs of arbitration, including by

not limited to reasonable attorney's fees, in such equitable manner as they determine. The Parties irrevocably agree that a final judgment in any arbitration proceeding relating to this Agreement shall be conclusive and shall be enforceable in any court having jurisdiction thereof.

15.10 Notwithstanding anything to the contrary in the foregoing, either Party may obtain from a court any interim or provisional relief that may be necessary to protect its rights or property. If a claim seeks both equitable relief and other relief, the portion of the claim that seeks relief other than equitable relief shall be stayed until after the claim for equitable relief is finally determined. The remaining portion of the claim shall then be resolved by binding arbitration as provided above.

15.11 All matters affecting the interpretation, validity, and performance of the Agreement shall be governed by the laws of the Commonwealth of Virginia applicable to agreements to be performed wholly with Virginia by Virginia residents.

15.12 This Agreement constitutes and contains the entire Agreement of the Parties respecting the subject matter and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether written or oral, between the Parties respecting its subject matter. Nothing herein shall be construed as granting to a Party under Section 2.1 by implication, estoppels or otherwise, any rights, title or interest in, or any license under, any Confidential Information, unless as provided in this Agreement. Wherever there is any conflict between any provision of the MTA and this Agreement, this Agreement shall prevail.

15.13 This Agreement shall be signed in two (2) counterparts each of which shall be deemed to be an original and both of which taken together shall constitute one and the same instrument. It shall not be necessary in making proof of this Agreement to product or account for more than the number of counterparts containing the respective signatures on behalf o the Parties hereto.

SIGNATURES ARE ON THE FOLLOWING PAGE

IN WITNESS WHEREOF, ATCC and the Licensee have caused this Agreement to be executed in duplicate by their respective duly authorized officers.

For ATCC
10801 University Boulevard, Manassas, Virginia 20110-2209, USA

By: /s/ Raymond H. Cypess, D.V.M., PhD. Date: 4/12/11
Raymond H. Cypess, D.V.M., PhD.
President and Chief Executive Officer

For Licensee
Heat Biologics, Inc.
119 Washington Avenue, Suite 401, Miami Beach, FL 33139, USA

By: /s/ Jeffrey Walt Date: 4/12/11
Printed Name: Jeffrey Walt
Title: CEO

[The remainder of this page intentionally left blank.]

IMPORTANT! PLEASE READ CAREFULLY BEFORE SUBMITTING AN ORDER. THIS IS A CONTRACT.

This Material Transfer Agreement ("MTA") is between Purchaser and the American Type Culture Collection, a notfor-profit organization, having its principal place of business at 10801 University Boulevard, Manassas, VA 20110-2209 ("ATCC"). Purchaser must have an approved, current ATCC account to place an order. This MTA is effective as of the last date of execution by the parties and governs the purchase and use of all ATCC Materials under the terms and conditions set forth below.

TERMS AND CONDITIONS

Definitions

"**ATCC Material(s)**" means materials acquired from ATCC as documented on an ATCC Sales Order.

"**ATCC Sales Order**" means an order submitted for ATCC Materials in a form and format as determined by ATCC from time to time.

"**Biological Material(s)"** means ATCC Materials Progeny Unmodified Derivatives and any Unmodified Derivatives within Modifications either individually or jointly.

"**Commercial Use**" means the sale license, lease, export transfer or other distribution of the Biological Materials to a person or entity not party to this MTA for financial gain or other commercial purposes and/or the use of the Biological Material: (a) to provide a service to a person or entity not party to this MTA for financial gain; (b) to produce or manufacture products for general sale or products for use in the manufacture of products ultimately intended for general sale (c) in connection with ADME (Absorption, Distribution Metabolism and Excretion) testing; (d) in connection with drug potency or toxicity testing which does not include either screening multiple cell lines for potential inclusion in a screening assay system or screening multiple compounds in a system for internal research purposes only; (e) in connection with proficiency testing service(s), including but not limited to, providing the service of determining laboratory performance by means of comparing and evaluating calibrations or tests on the same or similar items or materials in accordance with predetermined conditions; or (f) for research conducted under an agreement wherein a for-profit entity receives a right whether actual or contingent to the results of the research. Commercial Use specifically does not include Industry Sponsored Academic Research.

"**Contributor(s)"** means an organization(s) and/or individual(s) providing original material to ATCC for deposit.

"**Industry Sponsored Academic Research**" means research sponsored by a for-profit organization carried out at a non-profit organization and by the non-profit organization's employees.

"**Investigator**" means the Purchaser's principal scientist or researcher using the Biological Material(s).

"**Modification(s)"** mean substances created by Purchaser which contain and/or incorporate a significant or substantial portion of ATCC Material.

"**Progeny**' means an unmodified descendant from the ATCC Materials, such as virus from virus, cell from cell/ or organism from organism.

"**Purchaser(s)"** means the organization purchasing and receiving ATCC Material pursuant to this MTA.

"**Unmodified Derivative(s)"** mean substances created by Purchaser that constitute an unmodified functional sub-unit or product not changed in form or character and expressed by the ATCC Material provided by ATCC. Unmodified Derivatives include, but are not limited to, subclones of unmodified cell lines, purified or fractionated subsets of materials provided by ATCC, proteins expressed by DNA/RNA supplied by ATCC, or monoclonal antibodies secreted by a hybridoma cell line.

Scope of Use

Subject to the terms of this MTA, Purchaser's Investigator may make and use the Biological Materials provided to Purchaser by ATCC ***for research purposes only in Purchaser's Investigator's laboratory only.*** The Biological Materials are not intended for use in humans. Purchaser agrees that Biological Materials designated as biosafety level 2 or 3 constitute known pathogens and that other Biological Materials not so designated may be pathogenic under certain conditions. Purchaser assumes all risk and responsibility in connection with the receipt, handling, storage, disposal, transfer and Purchaser's use of the Biological Materials including without limitation taking all appropriate safety and handling precautions to minimize health or .environmental risk. Purchaser

agrees that any activity undertaken with the Biological Materials will be conducted in compliance with all applicable guidelines, laws and regulations, and that Purchaser will obtain all permits, licenses or other approvals required by any governmental authority in connection with purchaser's receipt, handling, storage, disposal, transfer and use of the Biological Materials.

Purchaser shall not distribute, sell, lend or otherwise transfer, to a person other than the Purchasers Investigator, or entity not party to this MTA, the Biological Material, as defined above, for any reason, without ATCC's prior written agreement.

Any Commercial Use of the Biological Material is strictly prohibited without ATCC's prior written consent. Purchaser acknowledges and agrees that Purchaser's use of certain Biological Material may require a license from a person or entity not party to this MTA or be subject to restrictions that may be imposed by a person or entity not party to this MTA ("Third Party Terms"). To the extent of ATCC's knowledge of the existence of any such applicable rights or restrictions, ATCC will take reasonable steps to identify the same, either in ATCC's catalog of ATCC Materials and/or through ATCC's customer service representatives, and to the extent they are in the possession of ATCC, ATCC shall make information regarding such Third Party Terms reasonably available for review by Purchaser upon request. Purchaser expressly acknowledges that if there is a conflict between this MTA and the Third Party Terms, the Third Party Terms shall govern. Use of the Biological Materials may be subject to the intellectual property rights of a person or entity not party to this MTA, the existence of which rights may or may not be identified in the ATCC catalog or website, and ATCC makes no representation or warranty regarding the existence or the validity of such rights. Purchaser shall have the sole responsibility for obtaining any intellectual property licenses necessitated by its possession and use of the Biological Materials.

The use permitted under this MTA for Industry Sponsored Academic Research extends only to the academic research carried out at the non-profit organization and the non-profit organization's employees. Any non profit Purchaser using the Biological Materials in connection with Industry Sponsored Academic Research agrees to notify the industrial sponsor that any use of the Biological Materials by the industry sponsor will require a separate license from ATCC and/or its Contributors and that ATCC and/or its Contributors are under no obligation hereunder to license any Biological Materials to any such industry sponsor.

Warranty; Warranty Disclaimer

ATCC warrants that (a) cells and microorganisms included in the ATCC Material shall be viable upon initiation of culture for a period of thirty (30) days after shipment thereof from ATCC and (b) any ATCC Material other than cells and microorganisms shall meet the specifications on the applicable ATCC Material product information sheet, certificate of analysis, and/or catalog description until the expiration date on the applicable ATCC Material's product label (such thirty (30) day period, or period until the expiration date, referred to herein as the "Warranty Period"). Purchaser's exclusive remedy, and ATCC's sole liability, for breach of the warranties set forth in this paragraph is for ATCC to, at ATCC's sole option, either (i) refund the fee paid to ATCC for such ATCC Material (exclusive of shipping and handling charges), or (ii) replace the ATCC Material. The warranties set forth in this paragraph apply only if Purchaser handles and stores the ATCC Material as described in the applicable ATCC Material product information sheet. To obtain the exclusive remedy, Purchaser must report the lack of viability or non-conformation to specifications to ATCC's Technical Service Department within the applicable Warranty Period. Any expiration date specified on the ATCC Material shipment documentation states the expected remaining useful life, but does not constitute a warranty or extend any applicable Warranty Period. **Except as expressly provided above, the ATCC Material and any technical information and assistance provided by ATCC are provided as-is, without warranties of any kind, express or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, typicality, safety, accuracy and/or non-infringement.**

Compliance with Laws

Purchaser is solely responsible for compliance with all foreign and domestic, federal, state and local statutes, ordinances and regulations applicable to use of the Biological Material. Without limiting the generality of the foregoing, any shipment of Biological Materials to countries outside the United States must comply with all applicable foreign and U.S. laws, including the U.S. export control laws and related regulations. Distribution by ATCC of Budapest Treaty patent deposits are made pursuant to, and in compliance with, all applicable laws and regulations, including the Budapest Treaty and related 37 C.F.R. provisions. If there is any conflict between the terms of this MTA and any applicable law or regulation with respect to Materials that are supplied hereunder by ATCC from the stock of a Budapest Treaty deposit, then the terms of the applicable law or regulation shall govern.

Indemnification
If Purchaser is a for-profit or private non-profit organization:

Purchaser hereby agrees to indemnify, defend and hold harmless ATCC and its Contributors against all third party claims losses, expenses and damages, including reasonable attorneys' fees (collectively "Claims") arising out of or relating to Purchaser's use, receipt, handling, storage, transfer, disposal and other activities relating to Biological Materials, provided that Purchaser's liability shall be limited to the extent that any such Claim arises out of ATCC's gross negligence or willful misconduct. All non-monetary settlements of any such Claims are subject to ATCC's prior written consent, such consent not to be unreasonably withheld.

If Purchaser is a Federal or State non-profit organization or a foreign organization that is prohibited by law from entering into the indemnification obligation set forth in tile above paragraph:
Purchaser assumes all liability for any and all third party claims, losses, expenses and damages, including reasonable attorneys' fees (collectively "Claims") arising out of or relating to Purchaser's use, receipt, handling, storage, transfer, disposal and other activities relating to Biological Materials, provided that Purchaser's liability shall be limited to the extent that any such Claim arises out of ATCC's gross negligence or willful misconduct, and provided further that if the Purchaser is the U.S. federal government or a state institution such Purchaser assumes such liability only to the extent provided under the Federal Tort Claims Act, 28 U.S.C. §§ 2671 et seq. or under equivalent applicable State or foreign law.

Limitation of Liability
In no event will ATCC or its Contributors be liable for any indirect, special, incidental or consequential damages of any kind in connection with or arising out of the MTA or Biological Materials (whether in contract, tort, negligence, strict liability, statute or otherwise) even if ATCC has been advised of the possibility of such damages. In no event shall ATCC's cumulative liability to the Purchaser exceed the fees paid by Purchaser under this MTA for the twelve (12) month period preceding the date of the event giving rise to the claim. Purchaser agrees that the limitations of liability set forth in this MTA shall apply even if a limited remedy provided hereunder fails of its essential purpose.

Intellectual Property Identification
As between the parties, ATCC and/or its Contributors shall retain ownership of all right, title and interest in the ATCC Materials, Progeny, Unmodified Derivatives and Biological Materials contained or incorporated in Modifications. Purchaser retains ownership of: (a) Modifications (except that, as between the parties, ATCC retains ownership rights to Biological Material included therein) and (b) those substances created through the use of Biological Material, but which do not contain Biological Material. Notwithstanding the foregoing, Purchaser acknowledges and agrees that the Biological Materials are subject to the restrictions noted in the "Scope of Use" section above. Purchaser agrees to acknowledge ATCC and any Contributor indicated by ATCC as the source of the Biological Material in all research, academic or scholarly publications and in patent applications that reference the Biological Material. If required by the Contributor of the ATCC Material, ATCC may inform the Contributor of Purchaser's identity. Purchaser explicitly acknowledges that ATCC retains all right, title and interest in the ATCC trademarks, trade-names, logos, ATCC catalog numbers and ATCC specific designations of ATCC Materials sold by ATCC (including but not limited to ATCC,UNIPLUS™, YOUR DISCOVERIES BEGIN WITH US ®, THE GLOBAL BIORESOURCE CENTER™, Authenticult™, SafeTsource™, ATCC CULTURES™, ATCC BIOPRODUCTS™, ATCC SPECIAL COLLECTIONS™, ATCC SERVICES™, ATCC Genuine Cultures™, ATCC Licensed Derivative ®, BioEscrow®, ATCC Standards Resource®, ATCC Proficiency Standard®, ATCC Standard Reference Material™), Purchaser expressly agrees not to use the ATCC trademarks, trade-names, logos, ATCC catalog numbers or ATCC specific designations of ATCC Materials sold by ATCC in any way without ATCC's prior written agreement.

Miscellaneous
Any disputes arising under this Agreement shall be tried exclusively in the United States District Court for the Eastern District of Virginia or if subject matter jurisdiction does not exist in that court, then in the state courts of Virginia for Prince William County, and Purchaser hereby expressly consents to, submits to and waives any objection to the jurisdiction of such courts; provided however, if Purchaser is a US Federal or State non-profit organization; then any disputes arising under this Agreement shall be tried exclusively in a court of competent jurisdiction.

Purchaser agrees that any breach of this Agreement, including but not limited to any breach of the scope of use provisions of this Agreement, will entitle ATCC to immediately cease without notice to Purchaser further shipments of Biological Materials and may create such irreparable injury as to entitle ATCC to seek temporary restraining orders and other preliminary or permanent injunctive relief in addition to all other equitable and legal remedies that may be afforded under US or foreign laws.

Purchaser may not assign or otherwise transfer this MTA or any rights or obligations under this MTA, whether by operation of law or otherwise. Any such attempted assignment or transfer will be void and of no force or effect. This MTA, including all documents incorporated herein by reference, constitutes the entire agreement between ATCC and Purchaser with respect to the Biological Material and supersedes all previous agreements or representations (whether written or oral) between ATCC and Purchaser relating to the same subject matter. This MTA may not be modified, waived or terminated except in writing and signed by the parties hereto. No term or provision contained herein shall be deemed waived and no breach excused unless such waiver or consent shall be In writing and signed by the parties. If any provision of this MTA is for any reason found to be unenforceable, the remainder of this Agreement will continue in full force and effect. None of the provisions of this MTA are intended to create, nor shall be deemed or construed to create, any relationship between ATCC or Purchaser other than that of independent entities contracting with each other hereunder solely for the purpose of effecting the provisions of this MTA.

Appendix B: Annual Progress Report

Licensee: SCL

Period Covered: From: / / Through / /

Reporting of development and Sales activities for Calendar Year. Check all activities that occurred during the Calendar Year for each Licensed Product, and indicate which of the Related Parties is responsible for each such activity.

If Licensee or its Related Parties made Sales of Licensed Products, then also submit an annual royalry report using the form found on Appendix C of this Agreement.

Name of Licensed Product	IND Filed	Phase I Clinical Trial	Phase II Clinical Trial	Phase III Clinical Trial	Application Submitted for Marketing Authorization	Marketing Authorization Granted	Sale or Commercial Exploitation	Discontinued

I hereby certify the information set forth above is correct and complete and meets all of the reporting requirements set forth under the Agreement.

By: (please sign) _____ Date: _____

Name (please print) _____

Title: _____

Appendix C: Annual Royalty Report

Licensee: SCL

Period Covered: From: / / Through / /

If the licenses granted in the Agreement covers several product lines, please prepare a separate report for each Licensed Product line; then combine all Licensed lines into a summary report.

If units were Sold by Related Party other than Licensee, clearly indicate which of the Related Parties were responsible, and the extent to which they were responsible, for each such Sales activity.

Report type:

☐ Single Licensed Product Report
Trademark of Licensed Product
ATCC Cell line(s)

☐ Multi-product Summary Report
Licensee's Tradenames of Product Lines
ATCC Cell line(s)

Country	Units Sold	Gross Sales	*Less Allowances	Relevant Sales	Royalty Rate	Conversion Rate	Period Royalty Amount in U.S. dollars
U.S.A.							
Canada							
Europe;							
-							
Japan							
Other:							
-							
TOTAL							

On a separate page, please indicate the reasons of any significant adjustment. Also note any unusual occurrences that affected royalty amounts during the period.

I hereby certify the information set forth above is correct and complete and meets all of the reporting requirements set forth under the Agreement.

By: (please sign) _____ Date: _____

Name (please print) _____

Title: _____

Appendix D: ATCC Materials

ATCC* CRL-1420™
ATCC* CRL-1678™
ATCC* CRL-1682™
ATCC* CRL-1687™
ATCC* CRL-1690™
ATCC* CRL-1749™
ATCC* CRL-166™
ATCC* CRL-78™

Appendix E. Third Party Contactor Transfer Agreement

This transfer agreement **("Agreement")** is between **[Third Party Transferee],** having a place of business at PLEASE FILL IN ADDRESS **("Recipient")** and **[Licensee],** having its principal place of business at PLEASE FILL IN ADDRESS **("Company").** This Agreement shall be effective as of the date of full execution.

Recitals

Company has entered into a certain biological material license agreement with the American Type Culture Collection **("ATCC")** (said agreement, identified by ATCC as 2010·BMLA-00038; hereinafter referred to as the "ATCC Agreement"), regarding the use of certain ATCC Materials.

Pursuant to the terms of the ATCC Agreement, during the term of the ATCC Agreement, ATCC has authorized Company employ and/or engage Third Parties, and transfer ATCC Material and Confidential Information to such Third Parties, for the limited purpose of assisting Company in the evaluation, research, development, and manufacture of Licensed Product for Company's benefit; provided, however, that Recipient agrees in writing to the terms that are set forth in this Agreement.

NOW THEREFORE, for good and valuable consideration and the following mutual promises, the receipt and sufficiency of which is hereby acknowledged, Recipient and Company agree to the following terms and conditions in order to utilize the ATCC Materials and hereby enter into this Agreement:

TERMS AND CONDITIONS

"ATCC Material(s)" means **ATCC MATERIAL** and all Confidential Information.
"Biological Material(s)" means ATCC Materials, Progeny, Unmodified Derivatives and Modifications, either individually or jointly.
"Confidential Information" means information of the disclosing party which includes or make reference to Biological Materials and/or ATCC that has commercial value, including without limitation, trade secrets, compounds, reagents, biological material, techniques for the handling and use of biological materials; know-how, formulas, processes, product ideas, inventions (whether patentable or not}, improvements, copyrightable or patentable materials, schematics, and other technical, business, financial, and product development plans, forecasts, strategies, and information, and that the disclosing party discloses to the receiving party. Confidential Information shall not include information that the receiving party can demonstrate: (a) was/is at the time of disclosure in the public domain; or (b) has come into or is in the public domain through no fault of the receiving party; or (c) was/is known to the receiving party prior to disclosure thereof by the disclosing party and was not acquired directly from the disclosing party on a confidential basis, as shown by written records in the receiving party's possession; or (d) was/is lawfully disclosed to the receiving party without obligation of confidence by a third party which was not under an obligation of confidence to the disclosing party with respect thereto; or (e) was/is independently developed by the receiving party without reference to or use of Confidential Information provided by the disclosing party as shown by written records in the receiving party's possession; or (f) is required by law to be disclosed, contingent upon the receiving party informing the disclosing party prior to any said disclosure in sufficient time to enable the disclosing party to seek a protective order or other appropriate legal remedy to protect the disclosure.
"Investigator" means the Recipient's principal scientist or research using the Biological Material(s).
"licensed Product(s)" means preventive or therapeutic vaccines or vaccine components where the development, manufacture, use, or Sale uses or incorporates Biological Materials.
"Modification(s)" mean substances created *by* Company or Recipient which contain and/or incorporate a significant or substantial portion of ATCC Material.
"Progeny" means an unmodified descendant from the ATCC Materials, such as virus from virus, cell from cell, or organism from organism
"Unmodified Derivative(s)" mean substances created by Company or Recipient that constitute an unmodified functional sub-unit or product expressed by the material provided by ATCC. Such non-limiting examples include: subclones of unmodified cell lines, purified or fractionated subsets of materials provided by ATCC, proteins expressed by DNA/RNA supplied by ATCC, or monoclonal antibodies secreted by a hybridoma cell line.

Scope of Use

COMPANY MAY MAKE AND USE BIOLOGICAL MATERIALS *IN Recipient's LABORATORY ONLY* FOR LICENSEE TO DESCRIBE SPECIFIC PURPOSE ("PERMITTED USE"). ANY USE OTHER THAN THE PERMITTED USE IS Strictly PROHIBITED.

Once the Permitted Use is completed, Recipient is authorized to transfer the Biological Materials to Company. **Recipient shall have no right to further distribute, sell, lend or otherwise transfer Biological Materials (including any Confidential Information) for any reason to any other third party.**

Confidential Information

Each party shall use reasonable efforts (which shall be at least as great as the efforts it uses to maintain the confidentiality of its own Confidential Information) to maintain any Confidential Information. The receiving party can use the disclosing party's Confidential Information for the limited purpose of exercising its rights and perform its obligations under this Agreement. The foregoing obligations of confidentiality shall survive expiration or termination of this Agreement for a period of five {5) years after the effective date of expiration or termination.

Recipient shall not originate any publicity, news release, or other public announcement relating to the Biological Materials (a "Public Announcement"), written or oral, whether to the public or the press, to stockholders, or otherwise, without prior written approval of ATCC with regard to the form, content and precise timing of such Public Announcement. Any such proposed Public Announcement shall first be submitted to ATCC for its review and approval in sufficient time to enable Recipient to consider and comment thereon. For purposes of this section, such submissions may be made to licensing@atcc.org.

Upon expiration or termination of this Agreement, or at any time upon the written request of Company, Recipient immediately shall (i) cease using the Confidential Information disclosed by Company, (ii) return any Confidential Information disclosed by Company, and (iii) destroy any notes or personal memoranda which includes or make reference to such Confidential Information or redact such information from such material.

IN WITNESS WHEREOF, Company and Recipient have caused this Agreement to be executed in duplicate by their respective duly authorized officers.

For Company:
Company Address

By: _____ Date: _____

Printed Name: _____

Title: _____

For Recipient:
Recipient Address

By: _____ Date: _____

Printed Name: _____

Title: _____

EXHIBIT 10.13

MANUFACTURING SERVICES AGREEMENT

This Manufacturing Services Agreement (the "**Agreement**") is made as of October __, 2011, (the "**Effective Date**") between XXXX XXXX., a Delaware corporation having its principal place of business at _____ ("XXXX"), and Heat Biologics, Inc., a Delaware Corporation, having an office at 15 TW Alexander Drive, Suite 119, Research Triangle Park, NC 27709 ("**CLIENT**") (each of XXXX and CLIENT, a "**Party**" and, collectively, the "**Parties**").

RECITALS

A.
XXXX operates a multi-client production facility located at _____ (the " **Facility**").

B.
CLIENT desires to have XXXX produce a product containing human cells and intended for therapeutic use in humans, and XXXX desires to produce such product.

C.
CLIENT desires to have XXXX conduct work according to individual Statement of Work, as further defined in Section 1.32 below.

NOW, THEREFORE, in consideration of the foregoing and the mutual promises and covenants hereinafter set forth, XXXX and CLIENT, intending to be legally bound, hereby agree as follows:

AGREEMENT

1.
DEFINITIONS

When used in this Agreement, capitalized terms will have the meanings as defined below and throughout the Agreement. Unless the context indicates otherwise, the singular will include the plural and the plural will include the singular.

"**Acceptance Period**" shall have the meaning set forth in Section 5.2.2.

"**Affiliate**" means, with respect to either Party, any other corporation or business entity that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with such Party. For purposes of this definition, the term "control" and, with correlative meanings, the terms "controlled by" and "under common control with" means direct or indirect ownership of more than fifty percent (50%) of the securities or other ownership interests representing the equity voting stock or general partnership or membership interest of such entity or the power to direct or cause the direction of the management or policies of such entity, whether through the ownership of voting securities, by contract, or otherwise.

"**Background Intellectual Property**" has the meaning set forth in Section 11.1

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

"**Batch**" means a specific quantity of Product that is intended to have uniform character and quality, within specified limits, and is produced according to a single manufacturing order during the same cycle of manufacture.

"**Batch Record**" means the production record pertaining to a Batch.

"**cGMP**" means the regulatory requirements for current good manufacturing practices promulgated by the FDA under 21 CFR Parts 210 and 211, as amended from time to time.

"**Change Order**" has the meaning set forth in Section 2.2.

"**CLIENT Development Materials**" has the meaning set forth in Section 2.3.

"**CLIENT Materials**" means the CLIENT Development Materials and the CLIENT Production Materials.

"**CLIENT Personnel**" has the meaning set forth in Section 4.8.1.

"**CLIENT Production Materials**" has the meaning set forth in Section 4.2.

"**Commencement Date**" means the date set forth in the Statement of Work, based on a Draft Plan, for the commencement of the production of the Product.

"**Confidential Information**" has the meaning set forth in Section 10.1.

"**Disapproval Notice**" shall have the meaning set forth in Section 5.2.2.

"**Draft Plan**" shall have the meaning set forth in Section 4.1.

"**End Use Product**" means a pharmaceutical or medicinal product containing Product, including without limitation such a product in a final packaged form and labeled for use in clinical trials or for commercial sale to end users.

"**Facility**" shall mean the Facility or such other XXXX facility as designated in writing by XXXX from time to time with the consent of CLIENT, which shall not be unreasonably withheld.

"**FDA**" means the U.S. Food and Drug Administration, and any successor agency thereof.

"**First Statement of Work**" has the meaning set forth in the definition of Statement of Work.

"**Intellectual Property**" means all patents, copyrights, trade secrets, know-how, inventions (whether or not patentable), discoveries, improvements, and all other intellectual property rights, including all applications and registrations with respect thereto, and all data, information, reports and any and all related documentation.

"**XXXX Operating Documents**" means the standard operating procedures, standard manufacturing procedures, raw material specifications, protocols, validation documentation, and supporting documentation used by XXXX, such as environmental monitoring, for operation and maintenance of the Facility and XXXX equipment used in the process of producing the Product, excluding any of the foregoing that are unique to the manufacture of Product.

"**XXXX Parties**" has the meaning set forth in Section 15.2.

"**Master Production Record**" means the documentation developed by XXXX that contains a detailed description of a Process and any other instructions to be followed by XXXX in the production of a Product.

"**Materials**" means all raw materials and supplies to be used in the production of a Product.

"**New Client Intellectual Property**" has the meaning set forth in Section 11.2.

"**New General Application Intellectual Property**" has the meaning set forth in Section 11.3.

"**Process**" means the manufacturing process for a Product developed by XXXX pursuant to the terms of this Agreement.

"**Product**" means a product based upon CLIENT's ImPACT Immune Pan Antigen Cytotoxic Technology.

"**Product Warranties**" means those warranties as specifically stated in Section 5.2.2.

"**Production Term**" shall have the meaning set forth in Section 4.4.

"**Quality Agreement**" means the Quality Agreement entered into by the Parties simultaneously with the execution hereof relating to a Product.

"**Regulatory Approval**" means the approval by the FDA to market and sell the Product in the United States.

"**SOP**" means a standard operating procedure.

"**Specifications**" means the Product specifications set forth in the Statement of Work or as modified by the Parties in connection with the production of a particular Batch of Product hereunder.

"**Statement of Work**" means a plan to develop a Process or Product that is attached hereto as Appendix A or later becomes attached through an amendment by the Parties. The first Statement of Work, which is attached hereto, is numbered Appendix A-1 and is hereby incorporated and made a part of this Agreement (the "**First Statement of Work**"). It is contemplated that each separate project shall have its own Statement of Work. As each subsequent Statement of Work is agreed to by the Parties, each shall state that it is to be incorporated and made a part of this Agreement and shall be consecutively numbered as A-2, A-3, etc.

"**Technology Transfer**" means the transfer of documentation, specifications, and production process by CLIENT to XXXX for the development of the Master Production Record for the manufacturing of the Product specifically for the CLIENT.

"**Third Party**" means any party other than XXXX, CLIENT or their respective Affiliates.

2.

STATEMENTS OF WORK - PROCESS AND PRODUCT DEVELOPMENT; TECHNOLOGY TRANSFER; ADDITIONAL SERVICES

2.1

Statement of Work. Prior to performing any Process or Product development, Technology Transfer, or Process or Product manufacture, the Parties will collaborate to develop a Statement of Work, describing the activities to be performed by the Parties, or to be subcontracted by XXXX to Third Parties. Once agreed to by the Parties, the Statement of Work shall be executed by each of the Parties and appended hereto as part of Appendix A. In the event of a conflict between the terms and conditions of this Agreement and any Statement of Work, the terms and conditions of this Agreement shall control.

2.2

Modification of Statement of Work. Should CLIENT want to change a Statement of Work or to include additional services to be provided by XXXX, CLIENT may propose to XXXX an amendment to the Statement of Work with the desired changes or additional services ("**Change Order**"). XXXX shall use commercially reasonable efforts to accommodate any such request and shall promptly notify CLIENT. If XXXX determines that it has the resources and capabilities to accommodate such Change Order, XXXX will prepare a modified version of the Statement of Work reflecting such Change Order (including, without limitation, any changes to the estimated timing, estimated charges or scope of a project) and will submit such modified version of the Statement of Work to CLIENT for review and comment. The modified Statement of Work shall be binding on the Parties only if it refers to this Agreement, states that it is to be made a part thereof, and is signed by both Parties. Whereafter such modified version of the Statement of Work will be deemed to have replaced the prior version of the Statement of Work. Notwithstanding the foregoing, if a modified version of the Statement of Work is not agreed to by both Parties, the existing Statement of Work shall remain in effect.

2.3

CLIENT Deliverables. Within the time period specified in a Statement of Work, CLIENT will provide XXXX with (a) the materials listed in the Statement of Work for which CLIENT is responsible for delivering to XXXX, and any handling instructions, protocols, SOPs and other documentation necessary to maintain the properties of such materials for the performance of the Statement of Work, and (b) any protocols, SOPs and other information and documentation in possession or control of CLIENT and necessary for the performance of the Statement of Work, and for the preparation of the Master Production Record in conformance with cGMP, including, without limitation, process information, SOPs, development data and reports, quality control assays, raw material specifications (including vendor, grade and sampling/testing requirements), product and sample packing and shipping instructions, and product specific cleaning and decontamination information, (collectively, the "**CLIENT Development Materials**").

2.4 Performance by XXXX. Subject to the provision by CLIENT of the CLIENT Development Materials pursuant to Section 2.3, XXXX will use commercially reasonable effortsto perform, directly or, subject to the terms of the Statement of Work or approval by CLIENT (such approval not to be unreasonably withheld), through a Third Party contractor, the work described in a Statement of Work in a professional and workmanlike manner in accordance with the terms of this Agreement and will use commercially reasonable efforts to complete tasks in accordance with the timelines specified in a Statement of Work. XXXX will promptly (and in any event within three business days of becoming aware of such event or circumstance) notify CLIENT of any material delays that arise during the performance of the Statement of Work.

2.5 Process Development Services. If CLIENT requires process development services ("PD Services") during the Term, Client shall notify XXXX of its requirements for PD Services. The parties shall negotiate in good faith for a period of up to sixty days regarding the scope of required services and the terms under which XXXX may provide such PD Service to CLIENT, during which negotiation period CLIENT shall not discuss or solicit proposals from third-party providers of PD Services. The terms may include discounted rates, priority service, a security deposit and/or such other terms as the parties may agree. CLIENT shall not be required to notify XXXX of, nor to negotiate with XXXX regarding, PD Services to be conducted by CLIENT's (i) employees at one or more facilities owned or operated by CLIENT or (ii) academic research partners operating under a written agreement for the provision of development services to CLIENT. In addition, if (a) CLIENT undergoes a Corporate Event (as defined below), the Parties shall thereafter have no further obligation under this Section 2.5 and (b) CLIENT engages a third party to perform PD Services after having afforded XXXX the opportunity to negotiate in good faith to perform such PD Services, the Parties shall thereafter have no further obligation under this Section 2.5 with regard to such PD Services.

2.6 Consulting Services. XXXX shall make its subject-matter experts in the areas of process improvement and manufacturing cost reduction reasonably available to CLIENT during the Term on a fee-for-service basis at then-current commercial rates.

3.

Technology Transfer

3.1

Based on the information provided by CLIENT and including process changes developed by XXXX pursuant to any applicable Statement of Work, XXXX will prepare the Master Production Record for the Process in accordance with the schedule set forth in the Statement of Work. CLIENT will inform XXXX of any specific requirements CLIENT may have relating to the Master Production Record, including, without limitation, any information or procedures CLIENT wishes to have incorporated therein. If XXXX intends to include in the Master Production Record the use of any assay, medium, or other technology that is not commercially available, XXXX will inform CLIENT of such intention and the Parties will meet to discuss and attempt to agree in good faith on the terms of use of such non-commercially available materials or technology in the Process.

3.2

CLIENT will cooperate with XXXX to assist XXXX to develop the Master Production Record and Process, including, without limitation, by providing XXXX with additional information and procedures as may be required to create the Master Production Record, Process, and/or any of the following: (i) manufacturing process information, SOPs, development reports, (ii) quality control assays, (iii) raw material specifications (including vendor, grade and sampling/testing requirements), (iv) Product and sample packing and shipping instructions, (v) Product specific cleaning and decontamination information.

3.3 XXXX will deliver a draft version of the Master Production Record to CLIENT for its review and approval in accordance with the schedule set forth in the Statement of Work. CLIENT will notify XXXX in writing of any objections it has to the draft Master Production Record, and upon such notification, representatives of XXXX and CLIENT will meet promptly to resolve such objections. Upon CLIENT's written acceptance of the draft Master Production Record, or in the event that CLIENT does not submit a written notice setting forth CLIENT's objections to the draft Master Production Record within ten (10) business days following receipt of such draft by CLIENT, such draft will be deemed approved by CLIENT.

3.4

The Process, Master Production Record, Specifications, and any improvements or modifications thereto developed during the term of this Agreement, but excluding any XXXX Operating Documents, New General Application Intellectual Property or XXXX Confidential Information included in any of the foregoing, will be deemed CLIENT Confidential Information and subject to the provisions set forth in Article 10. CLIENT shall be permitted to use the Process and/or the Master Production Record to manufacture and sell Product; provided, however, that if the Process and/or the Master Production Record incorporates or contains any XXXX Background Intellectual Property, XXXX Confidential Information or New General Application Intellectual Property, prior to any disclosure of such XXXX Background Intellectual Property, XXXX Confidential Information or New General Application Intellectual Property to, or use by, a Third Party manufacturer, CLIENT shall obtain XXXX's written consent to such disclosure , which consent shall not be unreasonably withheld.

4.

MANUFACTURE OF PRODUCT; ORDER PROCESS; DELIVERIES

4.1

Draft Plan. Together with the draft version of the Master Production Record described in Section 3.3 above, XXXX will deliver to CLIENT for review and comment, a proposed draft plan describing the activities to be performed by XXXX, or to be subcontracted by XXXX to Third Parties, in the production of a Product (the "**Draft Plan**"). Once XXXX delivers to CLIENT the proposed Draft Plan, the parties will meet to decide whether to issue a new Statement of Work pursuant to Section 2.1, or to modify an existing Statement of Work pursuant to Section 2.2, based on that Draft Plan and any agreed upon modifications.

4.2

CLIENT Deliverables. Within any time period specified in the Draft Plan and agreed to in any applicable Statement of Work, CLIENT will use commercially reasonable efforts to provide XXXX with the materials listed in the Statement of Work required to be supplied by CLIENT for the production of the Product, and any handling instructions, protocols, SOPs and other documentation necessary to maintain the properties of such materials for the performance of the Draft Plan (collectively, the "**CLIENT Production Materials**"). XXXX shall not be responsible for any delay resulting from CLIENT's to deliver the CLIENT Production Materials in accordance with the timelines set forth in the Draft Plan or any applicable Statement of Work.

4.3 **Commencement Date**. The Statement of Work based on a Draft Plan will include a Commencement Date agreed upon by the Parties.

4.4
Manufacture by XXXX. During the time period specified in any Statement of Work during which Product will be manufactured (the "**Production Term**"), XXXX will use commercially reasonable efforts to manufacture, package, ship, handle quality assurance and quality control for the Product, all as set forth in the Statement of Work, and to deliver to CLIENT the quantities of Product requested by CLIENT in the Statement of Work, all in accordance with the terms set forth in Section 4.5 below.

4.4.1
Minimum Purchase Obligations. CLIENT shall order no less than XXXX percent (XXXX%) of its annual global requirements for Products from XXXX in accordance with the terms of this Agreement (the "**Minimum Purchase Obligation**"). The Minimum Purchase Obligation shall apply to all Products required by CLIENT in any year during the Term, except those Products specifically excluded under Section 4.4.2 below. By way of illustration, the Minimum Purchase Obligation shall include Products for use in (i) any End Use Product in Phase II-B clinical trials or later (including, without limitation, Products in clinical trials for non-small cell lung cancer indications) and (ii) any End Use Product approved for commercial sale.

4.4.2 Exclusions.

(a) Small-Scale Clinical Manufacture. The Minimum Purchase Obligation shall not apply to Products for use in Phase I or Phase II-A clinical trials with enrollments of less than one hundred (100) patients, only to the extent such Products are manufactured by CLIENT in facilities operated by CLIENT or by CLIENT's academic research partners under written agreement therefor. CLIENT shall notify XXXX within a reasonable period of time prior to commencement of manufacturing by CLIENT or its academic research partners of Product under this Section.

(b) Following Corporate Event. Upon consummation of a transaction in which (x) CLIENT transfers all or substantially all of the assets or operations of the business related to the development and sale of a Product to a third party whether by exclusive license, sale or other disposition, (y) Client undergoes a change in control following which more than fifty percent (50%) of the outstanding voting securities of CLIENT are owned by a third party unaffiliated with the stockholders of the CLIENT prior to such transfer or (z) Client grants to a third party a license to make and/or sell (including upon the exercise of an option to acquire the right to make and/or sell) one or more Products where the third party is regularly engaged in the marketing and sale of pharmaceutical and/or biotechnology products (i.e., such third party is not solely or primarily engaged in the business of providing contract manufacturing services) (any such transaction, a "**Corporate Event**"), the Minimum Purchase Obligation relating to the Product(s) so effected shall be reduced to XXXX percent (XXXX%) of CLIENT's annual global requirements for such Product(s) for six months following the consummation of the Corporate Event and to XXXX percent (XXXX%) of CLIENT's annual global requirements for such Product(s) for the following eighteen months, subject in each case to the exclusions set forth in Section 4.4.2(a); provided, however, that CLIENT may elect to terminate such obligation at any time following the consummation of a Corporate Event by paying to XXXX an amount equal to the greater of:

(A) the most recent Batch price times twenty-five percent (25%) of the annual volume of Batches ordered in the immediately preceding year times the number of months (or fraction thereof) (if any) remaining in the first eighteen (18) months following consummation of the Corporate Event, with the product divided by twelve (12) OR

(B) (x) the most recent Batch price times twenty-five percent (25%) of the volume of Batches forecast to be ordered during the months (or fraction thereof) (if any) remaining in the first twelve (12) months following consummation of the Corporate Event, plus (y) the most recent Batch price times ten percent (10%) of the volume of Batches forecast to be ordered during the next six (6) months following conclusion of the period described in clause (x).

plus in either case, (C) all costs incurred or irrevocably committed by XXXX prior to delivery of such election to XXXX (such payment, the "Termination Fee"). CLIENT must give XXXX thirty (30) days written notice of any election pursuant to the preceding sentence. Following delivery by CLIENT of notice of a pending or completed Corporate Event, the Parties shall work together in good faith to provide for the continued production of Product by XXXX for the successor in interest to CLIENT and/or to transition production of Product to the successor or its designated manufacturer. CLIENT or such successor shall be responsible for the reasonable costs and expenses associated with effecting such transition. After two years following consummation of the Corporate Event (or sooner if an election is made and Termination Fee is fully paid pursuant to this Section) no Minimum Purchase Obligation for such Product(s) shall apply and either party may thereafter terminate this Agreement as to such Product (in the case of disposition or license of the business or assets related to such Product) or in its entirety (in the case of a change of control of the Company or sale or license of all or substantially all of the Company's assets) upon sixty (60) days notice.

4.4.3

Forecasting. No later than the first (1st) day of each calendar quarter, CLIENT shall supply XXXX with a written forecast showing CLIENT's estimated quarterly requirements for Product for the following twenty-four (24) month period (the "Forecast"). Except as set forth in Clause 4.4.4 below, the forecast shall not be binding on CLIENT and shall be used by XXXX solely for planning purposes. No later than thirty days (30) days following XXXX's receipt of a Forecast, XXXX shall provide written notice to CLIENT of whether it has (as of the date of receipt of the Forecast) capacity available to manufacture the quantities of Products forecasted therein. Notwithstanding the foregoing, CLIENT acknowledges and agrees that such written communication from XXXX shall not constitute a binding obligation upon, or create any liability for, XXXX. If CLIENT's Forecasts would require XXXX to expand its capacity beyond the then-current capacity at the Facilities used for the manufacture of Products, then XXXX shall notify CLIENT in writing of the potential expansion required, and the Parties will discuss the amount of additional capacity that is needed, as well as the various options that may be available to provide such capacity as well as associated costs and tax benefits of the various options. Without limiting the generality of the foregoing, if capacity constraints at the XXXX Facility or other commercial or legal considerations make the production of Product at a facility owned or controlled by an Affiliate of XXXX advantageous to CLIENT, XXXX shall use all reasonable efforts to cause one or more Affiliates of XXXX to produce Product for CLIENT on terms substantially identical to those set forth in this Agreement.

4.4.4 Purchase Orders. CLIENT shall place purchase orders binding on CLIENT for its requirement of the Product in full Batch quantities at least four (4) months (or earlier as may be agreed by the Parties) prior to the Commencement Date. Each binding purchase order, signed by CLIENT's duly authorized representative and accepted in writing by XXXX, shall authorize XXXX to manufacture such quantities of the Product as are set forth therein. XXXX shall not be obligated to commence manufacture of any Product unless and until such written purchase order is accepted in writing by XXXX. XXXX shall be obligated to accept any purchase order for delivery of Product during a specified month so long as the quantities of Product ordered by CLIENT for delivery during such month do not exceed the quantity forecasted for that month during the Semi Firm Period (as defined below) by more than twenty five percent. Any delivery date set forth in XXXX's written confirmation of a purchase order shall be an estimated delivery date only, and XXXX shall be deemed to have timely delivered Product so long as it is delivered no more than three days before or day after the date specified for delivery by CLIENT. Where CLIENT issues any purchase order in respect of any Batches, any additional or inconsistent terms or conditions of any purchase order, acknowledgement or similar standardized form given or received pursuant to this Agreement shall have no effect and such terms and conditions are hereby excluded.

4.4.5 Rescheduling. XXXX shall have the right to reasonably reschedule a Commencement Date upon reasonable prior written notice to CLIENT, provided that the rescheduled Commencement Date is no earlier or no later than ninety (90) days from the original schedule at time of placement of the binding purchase order. If the CLIENT requests to change the Commencement Date, XXXX will make all reasonable attempts to accommodate the request; provided, however, in the event that this change would impact other projects scheduled for occupancy in the designated suite or suites, the CLIENT's project may be delayed until an adequate time period is available in the schedule. Any such change requested by CLIENT may result in a fee as may be set forth in the applicable Statement of Work.

4.4.6 Cancellation of a Binding Purchase Order for Product manufactured for use in Clincal Trials. CLIENT may cancel a binding purchase order upon written notice to XXXX, subject to the payment of a cancellation fee as calculated below (the "**Clinical Cancellation Fee**"):

(a) In the event that CLIENT provides written notice of cancellation to XXXX less than or equal to one (1) month prior to the Commencement Date of a subject Batch, or after XXXX has commenced manufacture of a subject Batch, then one hundred percent (100%) of the Batch Price of each such cancelled Batch is payable;

(b) In the event that CLIENT provides written notice of cancellation to XXXX more than one (1) month but less than or equal to four (4) months prior to the Commencement Date of a subject Batch, then thirty-five percent (35%) of the Batch Price of each such cancelled Batch is payable;

(c) In the event that CLIENT provides written notice of cancellation to XXXX more than four (4) months but less than or equal to six (6) months prior to the Commencement Date of a subject Batch (i.e., during the "**Clinical Semi-Firm Period**"), then fifteen percent (15%) of the Batch Price of each such cancelled Batch is payable; or

(d) In the event CLIENT provides written notice of cancellation more than six (6) months prior to the Commencement Date of a subject Batch, then no Cancellation Fee is payable.

4.4.7 Cancellation of a Binding Purchase Order for Product manufactured for Commercial Supply. CLIENT may cancel a binding purchase order upon written notice to XXXX, subject to the payment of a cancellation fee as calculated below (the "**Commercial Cancellation Fee**" and together with the Clinical Cancellation Fee, the "**Cancellation Fee**"):

(a) In the event that CLIENT provides written notice of cancellation to XXXX less than or equal to three (3) months prior to the Commencement Date of a subject Batch, or after XXXX has commenced manufacture of a subject Batch, then one hundred percent (100%) of the Batch Price of each such cancelled Batch is payable;

(b) In the event that CLIENT provides written notice of cancellation to XXXX more than three (3) months but less than or equal to six (6) months prior to the Commencement Date of a subject Batch (the "**Commercial Semi-Firm Period**" and together with the Clinical Semi-Firm Period, the "**Semi-Firm Period**"), then fifty percent (50%) of the Batch Price of each such cancelled Batch is payable;

(c) In the event that CLIENT provides written notice of cancellation to XXXX more than six (6) months but less than or equal to nine (9) months prior to the Commencement Date of a subject Batch, then thirty percent (30%) of the Batch Price of each such cancelled Batch is payable; or

(d) In the event CLIENT provides written notice of cancellation more than nine (9) months prior to the Commencement Date of a subject Batch, then no Cancellation Fee is payable.

4.4.8 Payment of Cancellation Fee. Any Cancellation Fee shall be payable within thirty (30) days following the Commencement Date of the Manufacturing Process associated with the cancelled Batch.

4.5 Packaging and Shipping. XXXX will package and label the Product for shipment in accordance with the Master Production Record and XXXX's standard practices in effect at the time of performance by XXXX. XXXX will deliver the Product EXW the Facility to a common carrier designated by CLIENT to XXXX in writing not less than ten days prior to the applicable delivery date unless otherwise agreed to in a Statement of Work. CLIENT will provide to XXXX its account number with the selected carrier and will pay for all shipping costs in connection with each shipment of Product. Each shipment will be accompanied by the documentation listed in the Draft Plan. XXXX will use commercially reasonable efforts to deliver each shipment of Product to CLIENT on the requested delivery date for such shipment. XXXX will promptly notify CLIENT if XXXX reasonably believes that it will be unable to meet a delivery date. CLIENT may take delivery of a Batch of Product (or any portion thereof) at any time after acceptance of such Batch in accordance with Section 5.2 (the "**Delivery Period**"). Until such time as CLIENT takes delivery of any Batch (or portion thereof), XXXX shall store such Product in accordance with the applicable Specifications and on the other terms and conditions set forth in the applicable Statement of Work.

4.6 Quality Agreement. Upon the decision to manufacture a Product according to a Draft Plan, the Parties shall enter into a separate Quality Agreement, in the form attached hereto, setting forth the terms for Product quality, quantity, price, and any other terms necessary for such agreements. Such Quality Agreement shall be separately appended to this Agreement.

4.7 Records. XXXX will maintain accurate records for the production of the Product, as required by applicable laws and regulations. XXXX will retain possession of the Master Production Record, all Batch Records and XXXX Operating Documents, and will make copies thereof available to CLIENT upon CLIENT's request and at CLIENT's expense. XXXX Operating Documents will remain XXXX Confidential Information. CLIENT will have the right to use and reference any of the foregoing in connection with a filing for Regulatory Approval of the Product or as otherwise authorized by the Agreement.

4.8 CLIENT Access.

4.8.1

CLIENT's employees and agents (including its independent contractors) (collectively, "**CLIENT Personnel**") may participate in the production of the Product only in such capacities as may be approved in writing in advance by XXXX. CLIENT Personnel working at the Facility are required to comply with XXXX's Operating Documents and any other applicable XXXX facility and/or safety policies. For the avoidance of doubt, CLIENT Personnel may not physically participate in the production or manufacture of any Product that may be used in or on humans.

4.8.2

CLIENT Personnel working at the Facility will be and remain employees of CLIENT, and CLIENT will be solely responsible for the payment of compensation for such CLIENT Personnel (including applicable Federal, state and local withholding, FICA and other payroll taxes, workers' compensation insurance, health insurance, and other similar statutory and fringe benefits). CLIENT covenants and agrees to maintain workers' compensation benefits and employers' liability insurance as required by applicable Federal and Maryland laws with respect to all CLIENT Personnel working at the Facility.

4.8.3

CLIENT will pay for the actual cost of repairing or replacing to its previous status (to the extent that XXXX determines, in its reasonable judgment, that repairs cannot be adequately effected) any property of XXXX damaged or destroyed by CLIENT Personnel, provided CLIENT shall not be liable for repair or replacement costs resulting from ordinary wear and tear.

4.8.4

CLIENT Personnel visiting or having access to the Facility will abide by XXXX standard policies, operating procedures and the security procedures established by XXXX. CLIENT will be liable for any breaches of security by CLIENT Personnel. In addition, CLIENT will reimburse XXXX for the cost of any lost security cards issued to CLIENT Personnel, at the rate of $50 per security card. All CLIENT Personnel will agree to abide by XXXX policies and SOPs established by XXXX, and will sign an appropriate confidentiality agreement.

4.8.5

CLIENT will indemnify and hold harmless XXXX from and against any and all losses, damages, liabilities, costs and expenses (including reasonable attorneys' fees and expenses) arising out of any injuries suffered by CLIENT Personnel while at the Facility or elsewhere, except to the extent caused by the gross negligence or willful misconduct on the part of any XXXX Party.

4.9 Disclaimers. CLIENT acknowledges and agrees that XXXX Parties will not engage in any Product refinement or development of the Product, other than as expressly set forth in this Agreement and the Statement of Work. CLIENT acknowledges and agrees that XXXX Parties have not participated in the invention or testing of any Product, and have not evaluated its safety or suitability for use in humans or otherwise.

5.

Product Warranties; Acceptance And Rejection Of Products

5.1

Product Warranties. XXXX warrants that any Product manufactured by XXXX pursuant to this Agreement, at the time of delivery pursuant to Section 4.5: (a) conforms to the Specifications; (b) was manufactured in accordance with the Master Production Record; and (c) was manufactured in accordance with cGMP.

5.2

Approval of Shipment.

5.2.1

When the Product ordered by CLIENT is ready for delivery, XXXX will notify CLIENT and supply CLIENT with the required documentation set forth in the Draft Plan.

5.2.2

Within thirty (30) calendar days after CLIENT's receipt of such documentation regarding such Product (the "**Acceptance Period**"), Client shall determine by review of such documentation whether or not the given Batch conforms to the product warranties set forth in Section 5.1 above ("**Product Warranties**"). If CLIENT asserts that the Product does not comply with the Product Warranties set forth in Section 5.1 above, CLIENT will deliver to XXXX, in accordance with the notice provisions set forth in Section 17.4 hereof, written notice of disapproval (the "**Disapproval Notice**") of such Product, stating in reasonable detail the basis for such assertion of non-compliance with the Product Warranties. If a valid Disapproval Notice is received by XXXX during the Acceptance Period, then XXXX and CLIENT will provide one another with all related paperwork and records (including, but not limited to, quality control tests) relating to both the production of the Product and the Disapproval Notice. If a valid Disapproval Notice is not received during the Acceptance Period, the Product will be deemed accepted and ready for shipment. Upon acceptance, the Product shall be delivered to CLIENT, and CLIENT shall accept delivery thereof, within 10-days after such acceptance. Title and risk of loss to such Product shall pass to CLIENT at the time of delivery to the common carrier pursuant to Section 4.5.

5.3

Dispute Resolution. XXXX and CLIENT will attempt to resolve any dispute regarding the conformity of a shipment of Product with the Product Warranties. If such dispute cannot be settled within 30 days of the submission by each Party of such related paperwork and records to the other Party, and if the Product is alleged not to conform with the Product Warranties set forth in Section 5.1(a), then CLIENT will submit a sample of the Batch of the disputed shipment to an independent testing laboratory of recognized repute selected by CLIENT and approved by XXXX (such approval not to be unreasonably withheld) for analysis, under quality assurance approved procedures, of the conformity of such shipment of Product with the Specifications. The costs associated with such analysis by such independent testing laboratory will be paid by the Party whose assessment of the conformity of the shipment of Product with the Specifications was mistaken.

5.4 Remedies for Non-Conforming Product.

5.4.1

In the event that the Parties agree, or an independent testing laboratory determines, pursuant to Section 5.3, that a Batch of Product fails to conform to the Product Warranties due to the failure of: (a) XXXX personnel properly to execute the Master Production Record, (b) XXXX personnel to comply with cGMP, or (c) the Facility utilities, then, at CLIENT's request, XXXX will produce for CLIENT sufficient quantities of Product to replace the non-conforming portion of such Batch of Product (the "**Production Rerun**"), in accordance with the provisions of this Agreement and at no additional cost to CLIENT. XXXX shall complete any Production Rerun as soon as possible following CLIENT's request therefore and in any event within 60 days of such request. If more than 25% of the Batches of a Product ordered by CLIENT for delivery during any 12 month period in which CLIENT orders more than 20 Batches, fails to conform to the Product Warranties due to the failure of (a), (b) or (c) and XXXX cannot cure the cause(s) of such failures within sixty (60) days of notice thereof, then the Minimum Purchase Obligation relating to such Product shall be of no further force and effect.

5.4.2

In the event that the Parties agree, or an independent testing laboratory determines, pursuant to Section 5.3, that a Batch of Product materially fails to conform to the Product Warranties for any reason other than as set forth in Section 5.4.1, then XXXX shall have no liability to CLIENT with respect to such Batch and XXXX will, at CLIENT's request, produce for CLIENT a Production Rerun at CLIENT's expense.

5.4.3

CLIENT acknowledges and agrees that its sole remedy with respect to the failure of Product to conform with any of the Product Warranties is as set forth in this Section 5.4, and in furtherance thereof, Client hereby waives all other remedies at law or in equity regarding the foregoing claims.

6.

Damage or Destruction of Materials and/or Product

6.1

Remedies. If during the manufacture of Product pursuant to this Agreement, Product and/or Materials are destroyed or damaged by XXXX Personnel, and such damage or destruction resulted from XXXX's failure to execute the Process in conformity with the Master Production Record or gross negligence, then, except as provided in Section 6.2 below, XXXX, as soon as it is commercially practicable to do so, will provide CLIENT with additional Product production time equal to the actual time lost because of the destruction or damage of the Product and/or Materials and will replace such Product and/or Materials at no additional cost to CLIENT. CLIENT acknowledges and agrees that its sole remedy with respect to damaged or destroyed Materials and/or Product (except for the non-conformity of shipped Product described in Section 5) is as set forth in this Section 6.1, and in furtherance thereof, CLIENT hereby waives all other remedies at law or in equity regarding the foregoing claims.

6.2

Limitations. Notwithstanding anything to the contrary set forth in the preceding Section 6.1, if during the manufacture of Product pursuant to this Agreement, Product or Materials are destroyed or damaged by XXXX Personnel while XXXX Personnel were acting at the direction of CLIENT Personnel, then XXXX will have no liability to CLIENT as the result of such destruction or damage.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

7. Storage Of Materials

7.1

Pre-Production. XXXX will store at the expense of CLIENT any CLIENT Materials, equipment or other property delivered pursuant to the Statement of Work or the Draft Plan to the Facility by CLIENT more than 30 days prior to the Commencement Date. The storage rates will be set forth in the Statement of Work and may be amended from time to time by XXXX. No storage fees will be charged during the period starting 30 days prior to the Commencement Date and ending upon the expiration or termination of the Production Term.

7.2

Post-Production. XXXX will store at the Facility free of charge any in–process materials, CLIENT Materials, equipment and other CLIENT property (other than Product manufactured hereunder) that remains at the Facility on the date of expiration or termination of the Production Term (collectively "**Remaining CLIENT Property**"), for up to 90 calendar days. If CLIENT has not provided any instructions as to the shipment or other disposition of Remaining CLIENT Property prior to the expiration of such ninety (90)-day period, XXXX shall, if directed by CLIENT destroy such Remaining CLIENT Property, or otherwise shall continue to store such Remaining CLIENT Property at the Facility or elsewhere. In the event that XXXX continues to store such Remaining CLIENT Property, CLIENT will pay to XXXX a storage charge at XXXX's then-standard storage rates for the period beginning on the ninety first (91st) day after the expiration or termination of the Production Term through the date that the storage terminates.

8. Regulatory Matters

8.1

Permits and Approvals. During the Production Term, XXXX will maintain any material licenses, permits and approvals necessary for the manufacture of the Product in the Facility. XXXX will promptly notify CLIENT if XXXX receives notice that any such license, permit, or approval is or may be revoked or suspended.

8.2

Inspections/Quality Audit by CLIENT. Up to two times during the Production Term provided for in any SOW and upon not less than 30 days' prior written notice, XXXX will permit CLIENT to inspect and audit the parts of the Facility where the manufacture of the Product is carried out in order to assess XXXX's compliance with cGMP, and to discuss any related issues with XXXX's management personnel. At CLIENT's request, any such inspection shall occur during the production of PRODUCT. CLIENT Personnel engaged in such inspection will abide by the terms and conditions set forth in Sections 4.8.4 and 10.

8.3

Inspections by Regulatory Agencies. XXXX will allow representatives of any regulatory agency to inspect the relevant parts of the Facility where the manufacture of the Product is carried out and to inspect the Master Production Record and Batch Records to verify compliance with cGMP and other practices or regulations and will promptly notify CLIENT of the scheduling of any such inspection relating to the manufacture of Product. XXXX will promptly send to CLIENT a copy of any reports, citations, or warning letters received by CLIENT in connection with an inspection of a regulatory agency to the extent such documents relate to or affect the manufacture of the Product.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

9. Financial Terms

9.1

Payments. CLIENT will make payments to XXXX in the amounts and on the dates set forth in the Statement of Work. In the event that CLIENT has not paid an invoice within thirty (30) business days of the applicable due date (as established by Section 9.3), CLIENT's failure shall be considered a material breach under Section 14.2, subject to the cure provisions set forth therein. Further, in addition to all other remedies available to XXXX, in the event that CLIENT has not paid an invoice within sixty (60) business days of the applicable due date (as established by Section 9.3), XXXX may elect to suspend the provision of all or a portion of the services under this Agreement, provided that CLIENT shall remain liable for all fees owed pursuant to the Statement of Work during any such suspension.

9.2

Security Deposit. The Security Deposit, as defined in the Statement of Work, will be returned to CLIENT within 60 days after the date of expiration or termination of this Agreement, if CLIENT has paid all fees, charges, or other payments due in connection with charges incurred prior to the expiration or termination of this Agreement, including, but not limited to, charges for lost, destroyed, stolen or damaged property of XXXX (all such fees, charges, or other payments being called "**Obligations**"). If any Obligations remain outstanding after the date of expiration or termination of this Agreement, then XXXX shall be entitled to apply the Security Deposit against the payment of such Obligations. The amount of the Security Deposit remaining, if any, after such application will be returned to CLIENT. CLIENT shall remain liable to XXXX for any deficiencies remaining after the application of the Security Deposit against the Obligations.

9.3

Invoices. Within 30 days of the end of each month during which charges were incurred, XXXX will provide CLIENT with an invoice setting forth a detailed account of any fees, expenses, or other payments payable by CLIENT under this Agreement for the preceding month. The amounts set forth in each such invoice will be due and payable within 30 days of receipt of such invoice by CLIENT. _

9.4

Taxes. CLIENT agrees that it is responsible for and will pay any sales, use orsimilar taxes (the "**Taxes**") resulting from XXXX's production of Product under this Agreement (except for income , franchise or property taxes payable by XXXX). To the extent not paid by CLIENT, CLIENT will indemnify and hold harmless the XXXX Parties from and against any and all penalties, fees, expenses and costs whatsoever in connection with the failure by CLIENT to pay the Taxes. XXXX will not collect any sales and use taxes from CLIENT in connection with the production of any Product hereunder if CLIENT provides to XXXX the appropriate valid exemption certificates.

9.5

Interest. Any fee, charge or other payment due to XXXX by CLIENT under this Agreement that is not paid within 30 days after it is due will accrue interest on a daily basis at a rate of 1 % per month (or the maximum legal interest rate allowed by applicable law, if less) from and after such date.

9.6

Method of Payment. All payments to XXXX hereunder by CLIENT will be in United States currency and will be by check, wire transfer, money order, or other method of payment approved by XXXX. Bank information for wire transfers is as follows:

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

Notwithstanding the foregoing, payments of up to $950,000.00 (the "**Note Amount**") may be made by CLIENT to XXXX under a Convertible Note (in the form of Exhibit A, the "**Convertible Note**") dated as of the Effective Date, which shall be delivered by CLIENT to XXXX on the Effective Date. Unless otherwise agreed in writing by the parties, each invoice (unless contested in whole or in part by CLIENT) up to an aggregate amount of the Note Amount shall be deemed to be paid thirty days after delivery of the invoice and the uncontested portion of such invoice shall be treated as an advance of principal by XXXX pursuant to the Convertible Note. CLIENT acknowledges and agrees that XXXX shall have no obligation to accept payment in excess of the Note Amount in any form other that check, wire transfer of immediately available funds or money order for any Product or services performed hereunder in excess of the Note Amount.

9.7

Cost Adjustments. After the first anniversary of the Effective Date, XXXX may (or in the case of any reduction in the PPI, XXXX shall) annually adjust the various costs and rates set forth in each Statement of Work to reflect changes in the cost of materials and/or labor rate paid by XXXX in connection with the production of Product under this Agreement; provided, however, that any increase in labor rates shall not exceed any percentage increase in the US Producer Price Index for the most recently published percentage change for the 12-month period preceding the applicable contract anniversary date. XXXX agrees to provide CLIENT with written notice of any such cost adjustment.

10.

Confidential Information

10.1

Definition. "**Confidential Information**" means all technical, scientific and other know-how and information, trade secrets, knowledge, technology, means, methods, processes, practices, formulas, instructions, skills, techniques, procedures, specifications, data, results and other material, pre-clinical and clinical trial results, manufacturing procedures, test procedures and purification and isolation techniques, and any tangible embodiments of any of the foregoing, and any scientific, manufacturing, marketing and business plans, any financial and personnel matters relating to a Party or its present or future products, sales, suppliers, customers, employees, investors or business, that has been disclosed by or on behalf of such Party to the other Party either in connection with the discussions and negotiations pertaining to this Agreement or in the course of performing this Agreement. Without limiting the foregoing, the terms of this Agreement will be deemed "Confidential Information" and will be subject to the terms and conditions set forth in this Article 10.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

10.2 Exclusions. Notwithstanding the foregoing Section 10.1, any information disclosed by a Party to the other Party will not be deemed "Confidential Information" to the extent that such information:

(a)
at the time of disclosure is in the public domain;

(b)
becomes part of the public domain, by publication or otherwise, through no fault of the Party receiving such information;

(c)
at the time of disclosure is already in possession of the Party who received such information, as established by contemporaneous written records;

(d)
is lawfully provided to a Party, without restriction as to confidentiality or use, by a Third Party lawfully entitled to possession of such Confidential Information; or

(e)
is independently developed by a Party without use of or reference to the other Party's Confidential Information, as established by contemporaneous written records.

10.3
Disclosure and Use Restriction. Except as expressly provided herein, the Parties agree that for the term of the Agreement and the five-year period following any termination of the Agreement, each Party and its Affiliates will keep completely confidential and will not publish or otherwise disclose any Confidential Information of the other Party, its Affiliates or sublicensees, except in accordance with Section 10.4. Neither Party will use Confidential Information of the other Party except as necessary to perform its obligations or to exercise its rights under this Agreement.

10.4
Permitted Disclosures. Each receiving Party agrees to (i) institute and maintain security procedures to identify and account for all copies of Confidential Information of the disclosing Party and (ii) limit disclosure of the disclosing Party's Confidential Information to i ts Affiliates, and with the other party's prior approval (which shall not be unreasonably withheld) and as part of confirmatory due diligence, investors and prospective sublicensees and prospective successors and each of its and their respective officers, directors, employees, agents, consultants and independent contractors having a need to know such Confidential Information for purposes of this Agreement; provided that such persons are informed of the terms of this Agreement and are subject to obligations of confidentiality, non-disclosure and non-use similar to those set forth herein. For clarification, CLIENT may disclose Confidential Information to the extent necessary to exercise its rights under Section 4.7 (e.g., to include any applicable XXXX Intellectual Property in regulatory filings).

10.5
Government-Required Disclosure. If a duly constituted government authority, court or regulatory agency orders that a Party hereto disclose information subject to an obligation of confidentiality under this Agreement, such Party shall comply with the order, but shall notify the other Party as soon as possible, so as to provide the said Party an opportunity to apply to a court of record for relief from the order.

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10.6 Publicity. Neither Party will refer to, display or use the other's name, trademarks or trade names confusingly similar thereto, alone or in conjunction with any other words or names, in any manner or connection whatsoever, including any publication, article, or any form of advertising or publicity, except with the prior written consent of the other Party.

11.

Intellectual Property

11.1

Generally. Except as expressly otherwise provided herein, neither Party will, as a result of this Agreement, acquire any right, title, or interest in any Intellectual Property made or conceived by the other Party prior to the Effective Date or independently of this Agreement ("**Background Intellectual Property**"). Except as expressly otherwise provided herein, ownership of any Intellectual Property that is developed, conceived, invented, first reduced to practice or made in connection with the manufacture of Product or performance of the services hereunder shall follow inventorship all as determined under applicable laws.

11.2 New Client Intellectual Property. Subject to Section 11.3, CLIENT shall own all right, title, and interest in and to any and all Intellectual Property that XXXX develops, conceives, invents, first reduces to practice or makes, solely or jointly with CLIENT or others, that is a development or improvement to CLIENT Materials or CLIENT's Background Intellectual Property (which, for clarity, shall expressly include CLIENT's ImPACT Immune Pan Antigen Cytotoxic Technology) (collectively, " **New Client Intellectual Property**").

11.3 New General Application Intellectual Property. Notwithstanding Section 11.2, and subject to the license granted in Section 11.4.3, XXXX shall own all right, title and interest in "**New General Application Intellectual Property**", which as used in this Agreement means Intellectual Property that XXXX or its Affiliates, contractors or agents develops, conceives, invents, or first reduces to practice or makes in the course of manufacture of Product or performance of the services hereunder that (i) is generally applicable to the development or manufacture of chemical or biological products or (ii) is an improvement of, or direct derivative of, any XXXX Background Intellectual Property. For avoidance of doubt, "New General Application Intellectual Property" shall include any material, processes or other items that embody, or that are claimed or covered by, any of the foregoing Intellectual Property.

11.4 License. Subject to the terms and conditions set forth herein (including payment of the purchase price as set forth herein):

11.4.1 XXXX hereby assigns to CLIENT all of its right, title and interest in and to any New Client Intellectual Property. XXXX shall promptly disclose to CLIENT in writing all New Client Intellectual Property. XXXX shall execute, and shall require its personnel as well as its Affiliates and their personnel, to execute, any documents reasonably required to confirm CLIENT's ownership of the New Client Intellectual Property, and any documents required to apply for, maintain and enforce any patent or other right in the New Client Intellectual Property;

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11.4.2 CLIENT hereby assigns to XXXX all of its right, title and interest in and to any New General Application Intellectual Property. CLIENT shall promptly disclose to XXXX in writing all New General Application Intellectual Property. CLIENT shall execute, and shall require its personnel as well as its Affiliates to execute, any documents reasonably required to confirm XXXX's ownership of the New General Application Intellectual Property, and any documents required to apply for, maintain and enforce any patent or other right in the New General Application Intellectual Property; and

11.4.3 XXXX hereby grants to CLIENT a non-exclusive, world-wide, fully paid-up, irrevocable, transferable license, including the right to grant sublicenses, under the New General Application Intellectual Property, to use, sell and import the Products manufactured under this Agreement and to make, have made, use, sell and import Products made by or on behalf of CLIENT that CLIENT is not required to purchase from XXXX pursuant to this AGREEMENT .

11.5 License to Client Materials. CLIENT hereby grants XXXX the non-exclusive right to use any CLIENT Materials, information and Background Intellectual Property during the term of this Agreement solely for the purpose of manufacturing of Product or performing the services hereunder.

11.6
Prosecution of Patents.

11.6.1
XXXX will have the sole right and discretion to file, prosecute and maintain patent applications and patents claiming New General Application Intellectual Property at XXXX's expense. CLIENT will cooperate with XXXX to file, prosecute and maintain patent applications and patents claiming New General Application Intellectual Property, and will, upon XXXX's request, review and provide comments to XXXX relating to such patent applications and patents.

11.6.2
CLIENT will have the sole right and discretion to file, prosecute and maintain patent applications and patents claiming New Client Intellectual Property at CLIENT's expense. XXXX will cooperate with CLIENT to file, prosecute and maintain patent applications and patents claiming New Client Intellectual Property, and will , upon CLIENT's request, review and provide comments to CLIENT relating to such patent applications and patents.

12.
Representations and Warranties

12.1
By CLIENT. CLIENT hereby represents and warrants to XXXX that, to the best of its knowledge, (i) it has the requisite intellectual property and legal rights related to the CLIENT Deliverables and the Product to authorize the performance of XXXX's obligations under this Agreement, and (ii) the performance of the Statement of Work and the production by XXXX of the Product as contemplated in this Agreement will not give rise to a potential cause of action by a Third Party against XXXX for infringement or another violation of intellectual property rights. Such representation and warranty will not apply to any production equipment supplied by XXXX.

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12.2 By XXXX. XXXX hereby represents and warrants to CLIENT that, to the best of its knowledge, (i) it has the requisite intellectual property rights in its equipment and Facility to be able to perform its obligations under this Agreement, and (ii) that XXXX's use of its equipment and Facility as contemplated in this Agreement will not give rise to a potential cause of action by a Third Party against CLIENT for infringement or another violation of intellectual property rights.

13.

Disclaimer; Limitation of Liability

13.1

DISCLAIMER. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT, XXXX MAKES NO REPRESENTATIONS AND GRANTS NO WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, WITH RESPECT TO THE PRODUCTS, MATERIALS, AND SERVICES PROVIDED UNDER THIS AGREEMENT, AND XXXX SPECIFICALLY DISCLAIMS ANY OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, OR EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE WITH RESPECT TO SUCH PRODUCTS, MATERIALS, OR SERVICES.

13.2

Disclaimer of Consequential Damages. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER OR ANY OF ITS AFFILIATES FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS, BUSINESS OR GOODWILL) SUFFERED OR INCURRED BY SUCH OTHER PARTY OR ITS AFFILIATES IN CONNECTION WITH THIS AGREEMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

13.3

Limitation of Liability. BOTH PARTIES HEREBY AGREE THAT TO THE FULLEST EXTENT PERMITTED BY LAW, XXXX'S LIABILITY TO CLIENT, FOR ANY AND ALL INJURIES, CLAIMS, LOSSES, EXPENSES, OR DAMAGES, WHATSOEVER, ARISING OUT OF OR IN ANY WAY RELATED TO THIS AGREEMENT FROM ANY CAUSE OR CAUSES, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, ERRORS, OMISSIONS OR STRICT LIABILITY, SHALL NOT EXCEED THE SUM OF (A) THE TOTAL CHARGES PAID BY CLIENT TO XXXX DURING THE 18 (EIGHTEEN) MONTHS PRECEDING THE EVENT GIVING RISE TO LIABILITY PLUS, (B) TO THE EXTENT NOT ALREADY ENCOMPASSED IN SUBCLAUSE (A), THE PRINCIPAL AMOUNT OF OUTSTANDING CONVERTIBLE DEBT SECURITIES OF CLIENT ISSUED TO XXXX OR ITS AFFILIATES ; PROVIDED, THAT TO THE EXTENT XXXX INCURS LIABILITY TO CLIENT UNDER THIS AGREEMENT, XXXX MAY, AT ITS OPTION, ELECT TO FIRST CANCEL ALL OR A PORTION OF OUTSTANDING CONVERTIBLE NOTES HELD BY IT PRIOR TO MAKING ANY CASH PAYMENT OR CREDIT OF CLIENT'S ACCOUNT. TO THE EXTENT THAT THIS CLAUSE 13.3 CONFLICTS WITH ANY OTHER CLAUSE, THIS CLAUSE SHALL TAKE PRECEDENCE OVER SUCH CONFLICTING CLAUSE. IF APPLICABLE LAW PREVENTS ENFORCEMENT OF THIS CLAUSE, THEN THIS CLAUSE SHALL BE DEEMED MODIFIED TO PROVIDE THE MAXIMUM PROTECTION FOR XXXX AS IS ALLOWABLE UNDER APPLICABLE LAW . THE FOREGOING LIMITATIONS SHALL NOT LIMIT XXXX'S INDEMNIFICATION OBLIGATIONS OR XXXX'S LIABILITY FOR ANY INTENTIONAL BREACH .

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14. Term and Termination

14.1

Term. The term of this Agreement will commence on the Effective Date and will continue until the eighth (8^{th}) anniversary of the Effective Date unless terminated prior to that time or extended by the Parties by mutual agreement (the "**Term**"); provided, that the Term shall automatically extend for up to two (2) additional terms of two (2) years each (each, an "**Additional Term**"), unless one Party provides no less than ninety (90) days written notice to the other Party prior to the end of the then-expiring Term or Additional Term, as the case may be.

14.2

Termination for Material Breach. Either Party may terminate this Agreement, by written notice to the other Party, for any material breach of this Agreement by the other Party, if such breach is not cured within thirty (30) days after the breaching Party receives written notice of such breach from the non-breaching Party; provided, however, that if such breach is not capable of being cured within such thirty-day period and the breaching Party has commenced and diligently continued actions to cure such breach within such thirty-day period, except in the case of a payment default, the cure period shall be extended to 120 days, so long as the breaching Party is making diligent efforts to do so. Such termination shall be effective upon expiration of such cure period.

14.3

Termination by Notice. If a Party receives notice that the production of Product hereunder or the clinical trials for which Product is being produced hereunder have been or will be suspended or terminated by the FDA (or other regulatory authority) , either Party may terminate this Agreement (in the case of suspension or termination of all Products by the FDA) or any applicable Statement of Work hereunder (in the case of suspension or termination of any particular Product by the FDA), in each case by providing written notice of termination not less than 2 months in advance of the date of termination. CLIENT may terminate any applicable Statement of Work hereunder if CLIENT determines to discontinue the production of a particular Product hereunder or the clinical trials for which that Product is being produced hereunder, in each case by providing written notice of termination not less than 2 months in advance of the date of termination. For the avoidance of doubt, in the event of termination by CLIENT under this Section 14.3, CLIENT shall as its sole obligation remain liable for all fees owed pursuant to any outstanding Statement of Work during such two-month period, together with all costs incurred or irrevocably committed by XXXX and any Cancellation Fees incurred in connection with termination; provided, that if CLIENT later pursues PD Services or manufacturing related to such Product during the Term that would otherwise be subject to this Agreement but for the termination of a Statement of Work pursuant to this Section 14.3, such PD Services or manufacturing (as the case may be) shall continue to be subject to this Agreement.

14.4

Termination by Insolvency. Either Party may terminate this Agreement upon notice to the other Party, upon (a) the dissolution, termination of existence, liquidation or business failure of the other Party; (b) the appointment of a custodian or receiver for the other Party who has not been terminated or dismissed within ninety (90) days of such appointment; (c) the institution by the other Party of any proceeding under national, federal or state bankruptcy, reorganization, receivership or other similar laws affecting the rights of creditors generally or the making by such Party of a composition or any assignment for the benefit of creditors under any national, federal or state bankruptcy, reorganization, receivership or other similar law affecting the rights of creditors generally, which proceeding is not dismissed within ninety (90) days of filing. All rights and licenses granted pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of Title 11 of the United States Code, licenses of rights of "intellectual property" as defined therein.

14.5 Effects of Termination.

14.5.1

Accrued Rights. Termination of this Agreement for any reason will be without prejudice to any rights that will have accrued to the benefit of a Party prior to such termination. Such termination will not relieve a Party of obligations that are expressly indicated to survive the termination of this Agreement.

14.5.2

Disposition of Remaining CLIENT Property and Confidential Information. Upon termination or expiration of this Agreement, XXXX will store any Remaining CLIENT Property as set forth in Section 7.2 and, at CLIENT's option, return or destroy any CLIENT Confidential Information in the possession or control of XXXX. Likewise, CLIENT will, at XXXX's option, return or destroy any XXXX Confidential Information in the possession or control of CLIENT. Notwithstanding the foregoing provisions: (i) XXXX may retain and preserve, at its sole cost and expense, samples and standards of each Product following termination or expiration of this Agreement solely for use in determining XXXX's rights and obligations hereunder; and (ii) each Party may retain a single copy of the other Party's Confidential Information for documentation purposes only and which shall remain subject to the obligations of nonuse and confidentiality set forth in this Agreement. In addition, upon CLIENT's reasonable request and at CLIENT's expense, XXXX shall use commercially reasonable efforts promptly to transfer to CLIENT or one designee of CLIENT, the Master Production Record and associated Process.

14.5.3

Security Deposits ; Securities . Upon any termination of this Agreement by XXXX pursuant to Section 14.2, XXXX will have the right to retain the portion of any Security Deposit paid to XXXX pursuant to a Statement of Work equal to the unpaid fees and all costs incurred or irrevocably committed by XXXX and any Cancellation Fees incurred in connection with termination. , without limiting any of its rights in law or in equity under this Agreement.

14.5.4

Survival. Sections 1, 3.4, 4.4, 4.9, 7.2, 9, 10, 11, 13, 14.4, 14.5, 15, 16 and 17 of this Agreement, together with any appendices referenced therein, will survive any expiration or termination of this Agreement.

15.

INDEMNIFICATION

15.1

Indemnification of Client. XXXX will indemnify CLIENT, its Affiliates, and their respective directors, officers, employees and agents, and defend and hold each of them harmless, from and against any and all losses, damages, liabilities, costs and expenses (including reasonable attorneys' fees and expenses) in connection with any and all liability suits, investigations, claims or demands (collectively, "**Losses**") to the extent such Losses arise out of or result from any claim, lawsuit or other action or threat by a Third Party arising out of: (a) any material breach by XXXX of this Agreement, or (b) the gross negligence or willful misconduct on the part of one or more of the XXXX Parties in performing any activity contemplated by this Agreement, except for those Losses for which CLIENT has an obligation to indemnify the XXXX Parties pursuant to Section 15.2, as to which Losses each Party will indemnify the other to the extent of their respective liability for the Losses.

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15.2 Indemnification of XXXX. CLIENT will indemnify XXXX and its Affiliates, and their respective directors, officers, employees and agents (the "**XXXX Parties**"), and defend and hold each of them harmless, from and against any and all Losses to the extent such Losses arise out of or result from any claim, lawsuit or other action or threat by a Third Party arising out of: (a) any material breach by CLIENT of this Agreement, (b) the use or sale of Products, except to the extent such Losses arise out of or result from a breach by XXXX of the Product Warranties, (c) the gross negligence or willful misconduct on the part of CLIENT or its Affiliates in performing any activity contemplated by this Agreement, or (d) the use or practice by XXXX of any process, invention or other intellectual property supplied by CLIENT to XXXX under this Agreement, except for those Losses for which XXXX has an obligation to indemnify CLIENT pursuant to Section 15.1, as to which Losses each Party will indemnify the other to the extent of their respective liability for the Losses.

15.3
Indemnification Procedure.

15.3.1
An "**Indemnitor**" means the indemnifying Party. An "**Indemnitee**" means the indemnified Party, its Affiliates, and their respective directors, officers, employees and agents.

15.3.2
An Indemnitee which intends to claim indemnification under Section 15.1 or Section 15.2 hereof shall promptly notify the Indemnitor in writing of any claim, lawsuit or other action in respect of which the Indemnitee, its Affiliates, or any of their respective directors, officers, employees and agents intend to claim such indemnification. The Indemnitee shall permit, and shall cause its Affiliates and their respective directors, officers, employees and agents to permit, the Indemnitor, at its discretion, to settle any such claim, lawsuit or other action and agrees to the complete control of such defense or settlement by the Indemnitor; provided, however, that in order for the Indemnitor to exercise such rights, such settlement shall not adversely affect the Indemnitee's rights under this Agreement or impose any obligations on the Indemnitee in addition to those set forth herein. No such claim, lawsuit or other action shall be settled without the prior written consent of the Indemnitor and the Indemnitor shall not be responsible for any legal fees or other costs incurred other than as provided herein. The Indemnitee, its Affiliates and their respective directors, officers, employees and agents shall cooperate fully with the Indemnitor and its legal representatives in the investigation and defense of any claim, lawsuit or other action covered by this indemnification, all at the reasonable expense of the Indemnitor. The Indemnitee shall have the right, but not the obligation, to be represented by counsel of its own selection and expense.

15.4
Insurance. CLIENT will maintain, at all times during the term of this Agreement when CLIENT is actively engaged in conducting clinical trials and for three years thereafter, a products liability insurance policy (the "**Insurance Policy**"), with a per occurrence limit of at least one million dollars ($ 1,000,000) and an aggregate limit of at least five million dollars ($5,000,000), and will provide a Certificate of Insurance to XXXX that the Insurance Policy has been endorsed to designate XXXX as an additional insured. CLIENT will maintain the Insurance Policy with an insurance company having a minimum AM Best rating of A and that is licensed to do business in the State of Maryland. CLIENT will provide XXXX with at least 30 days' written notice prior to termination of such Insurance Policy.

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16. Additional Covenants

16.1

Non-Solicitation. During the term of this Agreement and for six months thereafter, each of the Parties agrees not to seek to induce or solicit any employee of the other Party or its Affiliates to discontinue his or her employment with the other Party or its Affiliate in order to become an employee or an independent contractor of the soliciting Party or its Affiliate; provided, however, that neither Party shall be in violation of this Section 16.1 as a result of making a general solicitation for employees or independent contractors. For the avoidance of doubt, the publication of an advertisement shall not constitute solicitation or inducement.

17. Miscellaneous

17.1

Independent Contractors. Each of the Parties is an independent contractor and nothing herein contained shall be deemed to constitute the relationship of partners, joint venturers, nor of principal and agent between the Parties. Neither Party shall at any time enter into, incur, or hold itself out to Third Parties as having authority to enter into or incur, on behalf of the other Party, any commitment, expense, or liability whatsoever.

17.2

Force Majeure. Neither Party shall be in breach of this Agreement if there is any failure of performance under this Agreement (except for payment of any amounts due under this Agreement) occasioned by any reason beyond the control and without the fault or negligence of the Party affected thereby, including, without limitation, an act of God, fire, flood, act of government or state, war, civil commotion, insurrection, acts of terrorism, embargo, sabotage, a viral, bacterial or mycoplasmal contamination which causes a shutdown of the Facility, prevention from or hindrance in obtaining energy or other utilities, a shortage of raw materials or other necessary components, labor disputes of whatever nature, or any other reason beyond the control and without the fault or negligence of the Party affected thereby (a "**Force Majeure Event**"). Such excuse shall continue as long as the Force Majeure Event continues. Upon cessation of such Force Majeure Event, the affected Party shall promptly resume performance under this Agreement as soon as it is commercially reasonable for the Party to do so. Each Party agrees to give the other Party prompt written notice of the occurrence of any Force Majeure Event, the nature thereof, and the extent to which the affected Party will be unable to fully perform its obligations under this Agreement. Each Party further agrees to use commercially reasonable efforts to correct the Force Majeure Event as quickly as practicable (provided that in no event shall a Party be required to settle any labor dispute) and to give the other Party prompt written notice when it is again fully able to perform such obligations. Without limiting the foregoing, in the event that a Force Majeure Event occurs with respect to XXXX, XXXX shall use commercially reasonable efforts to cause one or more Affiliates of XXXX to perform the obligations of XXXX under this Agreement. If a Force Majeure Event substantially interferes with XXXX's performance for a period of more than 90 days, CLIENT shall have the right to terminate this Agreement and any active statement of work.

17.3

Condemnation. If the Facility is condemned or taken as a result of the exercise of the power of eminent domain or will be conveyed to a governmental agency having power of eminent domain under the threat of the exercise of such power (any of the foregoing, a "**Condemnation**"), then this Agreement will terminate as of the date on which title to the Facility vests in the authority so exercising or threatening to exercise such power and CLIENT will not have any right to the Condemnation proceeds.

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17.4 **Notices**. Any notice required or permitted to be given under this Agreement by any Party shall be in writing and shall be (a) delivered personally, (b) sent by registered mail, return receipt requested, postage prepaid, (c) sent by a nationally-recognized courier service guaranteeing next-day or second day delivery, charges prepaid, or (d) delivered by facsimile (with documented evidence of transmission), to the addresses or facsimile numbers of the other Party set forth below, or at such other addresses as may from time to time be furnished by similar notice by any Party. The effective date of any notice under this Agreement shall be the date of receipt by the receiving Party.

If to XXXX:

XXXX

With a copy to:

XXXXXXXX If to Client:

Heat Biologics, Inc.
Attn: President
15 TW Alexander Drive, Suite 119
Research Triangle Park, NC 27709
Fax: (305) 503-8566

Either Party may change its address for notice by giving notice thereof in the manner set forth in this Section 17.4.

17.5 **Entire Agreement; Amendments**. This Agreement, including the Appendices attached hereto and referenced herein, constitutes the full understanding of the Parties and a complete and exclusive statement of the terms of their agreement with respect to the specific subject matter hereof and supersedes all prior agreements and understandings, oral and written, among the Parties with respect to the subject matter hereof. No terms, conditions, understandings or agreements purporting to amend, modify or vary the terms of this Agreement (including any Appendix hereto) shall be binding unless hereafter made in a written instrument referencing this Agreement and signed by each of the Parties.

17.6 **Governing Law**. This Agreement will be governed by and construed in accordance with the internal laws of the State of Delaware, without giving effect to its conflicts of laws provisions.

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17.7 Counterparts. This Agreement and any amendment hereto may be executed in any number of counterparts, each of which shall for all purposes be deemed an original and all of which shall constitute the same instrument. This Agreement shall be effective upon full execution by facsimile or original, and a facsimile signature shall be deemed to be and shall be as effective as an original signature.

17.8

Severability. If any part of this Agreement shall be found to be invalid or unenforceable under applicable law in any jurisdiction, such part shall be ineffective only to the extent of such invalidity or unenforceability in such jurisdiction, without in any way affecting the remaining parts of this Agreement in that jurisdiction or the validity or enforceability of the Agreement as a whole in any other jurisdiction. In addition, the part that is ineffective shall be reformed in a mutually agreeable manner so as to as nearly approximate the intent of the Parties as possible.

17.9

Titles and Subtitles. All headings, titles and subtitles used in this Agreement (including any Appendix hereto) are for convenience only and are not to be considered in construing or interpreting any term or provision of this Agreement (or any Appendix hereto).

17.10

Exhibits. All "RECITALS", "DEFINITIONS", exhibits and appendices referred to herein form an integral part of this Agreement and are incorporated into this Agreement by such reference.

17.11

Pronouns. Where the context requires, (i) all pronouns used herein will be deemed to refer to the masculine, feminine or neuter gender as the context requires, and (ii) the singular context will include the plural and vice versa.

17.12

Assignment. This Agreement shall be binding upon the successors and assigns of the Parties and the name of a Party appearing herein shall be deemed to include the names of its successors and assigns. Neither Party may assign its interest under this Agreement without the prior written consent of the other Party, such consent not to be unreasonably withheld , except that a party may assign this Agreement to an Affiliate or in connection with a merger, sale, license or other disposition of all or substantially all of its business to which this Agreement relates . Any permitted assignment of this Agreement by either Party will be conditioned upon that Party's permitted assignee agreeing in writing to comply with all the terms and conditions contained in this Agreement. Any purported assignment without a required consent shall be void. No assignment shall relieve any Party of responsibility for the performance of any obligation that accrued prior to the effective date of such assignment.

17.13

Waiver. The failure of any Party at any time or times to require performance of any provision of this Agreement (including any Appendix hereto) will in no manner affect its rights at a later time to enforce the same. No waiver by any Party of any term, provision or condition contained in this Agreement (including any Appendix hereto), whether by conduct or otherwise, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, provision or condition or of any other term, provision or condition of this Agreement (including any Appendix hereto).

17.14 Dispute Resolution. If the Parties are unable to resolve a dispute, despite its good faith efforts, either Party may refer the dispute to the President of each Party's respective business unit (or other designee). In the event that no agreement is reached by the Presidents (or other designees) with respect to such dispute within thirty (30) days after its referral to them, the Parties shall be obligated to submit the dispute to binding arbitration in accordance with the rules of the American Arbitration Association ("**AAA**") for commercial arbitration, utilizing one (1) arbitrator mutually agreeable to the Parties. If the Parties are unable to reach agreement as the arbitrator, the arbitrator shall be chosen in accordance with the AAA commercial arbitration rules. The arbitrator shall present a detailed written statement of his/her findings; and the Parties shall be bound thereby. The arbitration proceedings and any documents or other information disclosed in connection therewith shall be subject to the requirements of confidentiality as set forth herein .

17.15 No Presumption Against Drafter. For purposes of this Agreement, CLIENT hereby waives any rule of construction that requires that ambiguities in this Agreement (including any Appendix hereto) be construed against the drafter.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date last signed by the parties hereto.

HEAT BIOLOGICS, INC.

_____ By: _____
Date Name:
Title:

XXXXXXXX

_____ By: _____
Date Name:
Title:

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

ASSIGNMENT AND ASSUMPTION AGREEMENT
(UMSS-114)

ASSIGNMENT AND ASSUMPTION AGREEMENT (the **"Agreement"),** dated as of June 26, 2009, by and among HEAT BIOLOGICS, INC., a Delaware corporation ("HEAT BIOLOGICS"), HEAT BIOLOGICS I, INC., a Delaware corporation ("HEAT I") and for the limited purpose set forth on the signature page hereto, the University of Miami, a Florida not-forprofit corporation ("UNIVERSITY").

WITNESSETH:

WHEREAS, HEAT BIOLOGICS and UNIVERSITY are parties to a License Agreement effective as of July 11, 2008, (the**"License Agreement")** and Amendment thereto dated April 29, 2009, (the **"License Amendment"),** (collectively referred to as **"License Agreements"),** relating to the technology and product currently identified as the Podack Cancer Vaccine **(UMSS-114);** and

WHEREAS, UNIVERSITY and HEAT BIOLOGICS entered into that certain Stockholders Agreement dated the 11th day of July, 2008, together with the University of Miami Investor Rights Agreement effective July 11, 2008, and the Common Stock Subscription Agreement dated July 1, 2008, granting to UNIVERSITY certain stock ownership rights together with rights to participate in future stock offerings by HEAT BIOLOGICS (hereinafter collectively referred to as the "Stock Agreements"); and

WHEREAS, UNIVERSITY is the owner and holder of eight percent (8%) of all issued and outstanding common stock of HEAT BIOLOGICS in each class and series on a fully-diluted basis, together with fully-dilutable common shares equal to two and one half percent (2.5%) of the total number of HEAT BIOLOGICS common shares in each class and series issued and outstanding, pursuant to the terms and conditions of the License Agreement and License Amendment; and

WHEREAS, HEAT BIOLOGICS has a past due and outstanding license issue fee obligation to UNIVERSITY, as set forth in section 8.1(a) of the License Agreement, as follows: One hundred fifty thousand ($150,000.00) dollars obligation, past due and outstanding, to wit: Payable within thirty (30) days of the Effective Date, on or before August 11, 2008; and

WHEREAS, HEAT BIOLOGICS has past due and outstanding patent fees and costs obligations to UNIVERSITY in the amount of eleven thousand seventeen and 09/100 ($11,017.09) dollars pursuant to section 5.1 of the License Agreement; and

WHEREAS, HEAT BIOLOGICS has a past due and outstanding license issue fee obligation together with past due and outstanding patent fees and costs obligations to UNIVERSITY pursuant to the License Agreement, in the total amount of one hundred sixty one thousand seventeen and 09/100 ($161,017.09) dollars; and

WHEREAS, HEAT BIOLOGICS requested, and UNIVERSITY granted an extension of the payment dates for past due license issue fees together with past due patent fees and costs, and as additional consideration shall pay UNIVERSITY the sum of twelve thousand five hundred ($12,500.00) dollars, to be due and payable on or before such payment extension date granted by UNIVERSITY; and

WHEREAS, HEAT I, is a corporation duly formed under the laws of the State of Delaware on the 28th day of April, 2009, and is an active corporation and in good standing; and

WHEREAS, pursuant to the License Agreements, HEAT BIOLOGICS desires to assign to HEAT I all of its rights and obligations under the License Agreements, and HEAT I desires to accept such assignment.

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants and obligations hereinafter set forth, the Parties hereto, intending to be legally bound, hereby agree as follows:

1) **Recitals**. The Parties mutually agree that the above recitals are true and correct, and are hereby incorporated by reference to this Agreement.

2) **Assignment and Assumption**.

(a) Effective immediately upon execution of this Agreement by all of the parties hereto, HEAT BIOLOGICS sells, transfers, assigns, conveys, grants and sets over to HEAT I, its successors and assigns forever, all of HEAT BIOLOGICS' rights, title and interest as of such date in and to all and any of HEAT BIOLOGICS' rights and obligations under, pursuant to and arising out of the License Agreements, as fully and entirely as the same would have been held and enjoyed by HEAT I as if this assignment had not been made, and

(b) HEAT I accepts, assumes, takes over and succeeds to all of HEAT BIOLOGICS' rights, title and interest as of such date in and to all and any of the HEAT BIOLOGICS' rights and obligations under, pursuant to and arising out of the License Agreements, and HEAT I covenants and agrees to discharge, perform and comply with, and to be bound by, all the terms, conditions, provisions, obligations, covenants and duties of HEAT BIOLOGICS in connection with all and any of HEAT BIOLOGICS' rights and obligations under, pursuant to and arising out of the License Agreements, as the same may be amended from time to time, (in each case, whether or not any of it relates to the period before or after the date hereof), as if HEAT I were an original party thereto.

3) **Successors**. This Agreement shall be fully binding upon and enforceable with respect to the parties, and their respective representatives, successors, partners, executors, and assigns.

4) **Authority**. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized

by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

5) **Governing Law.** This Agreement shall be governed by and construed in accordance with the law of the State of Florida, without regard to the conflicts of law rules of such state. In any action or proceeding arising out of or relating to this Agreement (an "Action"), each of the parties hereby irrevocably submits to the exclusive jurisdiction of any federal or state court sitting in Miami-Dade County, Florida, and further agrees that any Action shall be heard and determined in such Florida federal court or in such state court. Each party hereby irrevocably waives, to the fullest extent it may effectively do so, the defense of an inconvenient forum to the maintenance of any Action in Miami-Dade County, Florida.

6) **Severability.** The provisions of this Agreement are severable, and if any part of it is found to be unenforceable, the other paragraphs shall remain fully valid and enforceable.

7) **Execution in Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

HEAT BIOLOGICS, INC., a Delaware corporation

By: /s/ Jeffrey Wolf
Name: Jeffrey Wolf
Title: President

HEAT BIOLOGICS I, INC., a Delaware corporation

By: /s/ Jeffrey Wolf
Name: Jeffrey Wolf
Title: President

In accordance with Paragraph 12. of the License Agreement, entitled Assignment, UNIVERSITY hereby consents to the assignment and assumption provided for by this Agreement:

Accepted and Agreed as of the date first set forth above:

UNIVERSITY OF MIAMI

By: /s/ Bart Chernow
Name: Bart Chernow, M.D.
Title: Director of UM Innovation
Vice Provost of Technology Advancement

BART CHERNOW. M.D., MACP
VICE PROVOST FOR TECHNOLOGY ADVANCEMENT
VICE PRESIDENT FOR SPECIAL PROGRAMS & RESOURCE STRATEGY
PROFESSOR OF MEDICINE AND ANESTHESIOLOGY

EXHIBIT 10.15

TERMINATION AGREEMENT
(UMSS97-14)

AGREEMENT (the "AGREEMENT") made and entered into this 26 day of June, 2009 (the "Effective Date"), by and between the University of Miami and its School of Medicine ("UNIVERSITY") and HEAT BIOLOGICS, INC., a Delaware corporation ("HEAT BIOLOGICS").

WITNESSETH:

WHEREAS, UNIVERSITY and HEAT BIOLOGICS entered into that certain License Agreement dated the 11th day of July, 2008, and Amendment thereto dated April 29, 2009, relating to the technology and product currently identified as the Podack Cancer Vaccine (**UMSS-114**), and

WHEREAS, UNIVERSITY AND HEAT BIOLOGICS entered into that certain Stockholders Agreement dated the 11th day of July, 2008, together with the University of Miami Investor Rights Agreement effective July 11, 2008, and the Common Stock Subscription Agreement dated July 1, 2008, (hereinafter collectively referred to as the "Stock Agreements"), granting to the UNIVERSITY certain stock ownership rights and rights to participate in future stock offerings by HEAT BIOLOGICS; and

WHEREAS, UNIVERSITY and HEAT BIOLOGICS presently desire to mutually terminate the Stock Agreements.

NOW THEREFORE, for the mutual promises and other good and valuable consideration contained herein, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

UNIVERSITY and HEAT BIOLOGICS mutually agree to terminate the Stock Agreements, effective immediately.

IN WITNESS WHEREOF, the parties have executed this AGREEMENT as of the date set forth below.

UNIVERSITY OF MIAMI

By: /s/ Bart Chernow Date: 6/30/09
Name: Bart Chernow, M.D.
Title: Director of UM Innovation
Vice Provost of Technology Advancement

BART CHERNOW. M.D., MACP
VICE PROVOST FOR TECHNOLOGY ADVANCEMENT
VICE PRESIDENT FOR SPECIAL PROGRAMS & RESOURCE STRATEGY
PROFESSOR OF MEDICINE AND ANESTHESIOLOGY

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf Date: June 26, 2009
Jeffrey Wolf, President

* If Shares are being subscribed for by an entity, the attached Certificate of Signatory must also be completed.

Number of Shares Subscribed for: 300,000 Shares
Purchase Price: $30.00

UNIVERSITY OF MIAMI
Name(s) Exactly as to Appear on Stock Certificate

Signature	Signature (if purchasing jointly)
Name Typed or Printed	UNIVERSITY OF MIAMI Name Typed or Printed
Residence Address	c/o Diane Cook Residence Address
	250 Ashe Building
City, State and Zip Code	Coral Gables, Florida 33124 City, State and Zip Code
Telephone	(305) 284-6297 Telephone
Tax Identification or Social Security Number	59-0624458 Tax Identification or Social Security Number

This Common Stock Subscription Agreement, including a subscription contained herein is agreed to and accepted as of July 7, 2009.

HEAT BIOLOGICS I, INC., a Delaware corporation

By: /s/ Jeffrey Wolf
Its: President

CERTIFICATE OF SIGNATORY

(To be completed if Shares are being subscribed for by an entity)

I, BART CHERNOW. M.D., MACP
VICE PROVOST FOR TECHNOLOGY ADVANCEMENT
VICE PRESIDENT FOR SPECIAL PROGRAMS & RESOURCE STRATEGY
PROFESSOR OF MEDICINE AND ANESTHESIOLOGY of

UNIVERSITY OF MIAMI (the "Entity").

I certify that I am empowered and duly authorized by the Entity to execute and carry out the terms of the Common Stock Subscription Agreement and to purchase and hold the Shares, and certify further that the Common Stock Subscription Agreement has been duly and validly executed on behalf of the Entity and constitutes a legal and binding obligation of the Entity.

IN WITNESS WHEREOF, I have set my hand this 6th day of July, 2009.

UNIVERSITY OF MIAMI
a Florida non-profit corporation:

By: /s/ Bart Chernow
Name: Bart Chernow, M.D.
Title: Director of UM Innovation
Vice Provost of Technology Advancement

EXHIBIT 10.16

HEAT BIOLOGICS, INC.

HEAT BIOLOGICS I, INC.

LOAN AND SECURITY AGREEMENT

This LOAN AND SECURITY AGREEMENT (the "Agreement") is entered unto as of August 7, 2012, by and between Square 1 Bank ("Bank" and Heat Biologics Inc. and Heat Biologics I, Inc. (collectively known as "Borrower").

RECITALS

Borrower wishes to obtain credit from time to time from Bank, and Bank desires to extend credit to Borrower. This Agreement sets forth the terms on which Bank will advance credit to Borrower, and Borrower will repay the amounts owing to Bank.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION.

1.1 Definitions. As used in this Agreement, all capitalized terms shall have the definitions set forth on Exhibit A. Any term used in the Code and not defined herein shall have the meaning given to the term in the Code.

1.2 Accounting Terms. Any accounting term not specifically defined on Exhibit A shall be construed in accordance with GAAP and all calculations shall be made in accordance with GAAP (except for non-compliance with FAS 123R in monthly reporting). The term "financial statements" shall include the accompanying notes and schedules.

2. LOAN AND TERMS OF PAYMENT

2.1 Credit Extensions

(a) Promise to Pay. Borrower promises to pay to Bank, in lawful money of the United States of America, the aggregate unpaid principal amount of all Credit Extensions made by Bank to Borrower, together with interest on the unpaid principal amount of such Credit Extensions at rates in accordance with the terms hereof.

(b) Term Loan

(i) Tranche A Term Loan. Subject to and upon the terms and conditions of this Agreement, Bank agrees to make one (1) or more term loans to Borrower in an aggregate principal amount not to exceed One Million Dollars ($1,000,000) (each a "Tranche A Term Loan" and collectively the "Tranche A Term Loans"). The amount of each Tranche A Term Loan shall be a multiple of $100,000. Borrower may request Tranche A Term Loans at any time from the date hereof through the Tranche A Term Loan Availability End Date. The proceeds of the Tranche A Term Loans shall be used for general working capital purposes and for capital expenditures.

(ii) Immediate Availability Upon Grant Event. Notwithstanding anything to the contrary in Section 2.1(b)(i) above, upon the occurrence of the Grant Event, the amount of Tranche A Term Loans that Borrower may request and Bank

agrees to make will increase to an aggregate principal amount not to exceed Two Million Seven Hundred Seventy-Five Thousand Dollars ($2,775,000) , provided that, notwithstanding anything to the contrary in Section 2.1(b)(iii) below, the aggregate principal amount of all Term Loans shall not exceed $2,775,000.

(iii) Tranche B Term Loan. Subject to and upon the terms and conditions of this Agreement , Bank agrees to make one (1) term loan to Borrower in an aggregate principal amount not to exceed One Million Dollars ($1,000,000) (the "Tranche B Term Loan", and together with the Tranche A Term Loans, the "Term Loans"). The amount of the Tranche B Term Loan shall be a multiple of $100,000. Borrower may request the Tranche B Term Loan on the day on which Borrower achieves the Tranche B Equity Trigger Event. The proceeds of the Tranche B Term Loan shall be used for general working capital purposes and for capital expenditures.

(iv) Interest and Principal Payments on Tranche A Term Loans. Interest shall accrue from the date of each Tranche A Term Loan at the rate specified in Section 2.3(a), and prior to the Tranche A Term Loan Availability End Date for the applicable Tranche A Term Loan shall be payable monthly beginning on the 7th day of the month next following such Tranche A Term Loan, and continuing on the same day of each month thereafter. Any Tranche A Term Loans that are outstanding on the Tranche A Term Loan Availability End Date shall be payable in 36 equal monthly installments of principal, plus all accrued interest, beginning on September 7, 2013, and continuing on the same day of each month thereafter through the Term Loan Maturity Date, at which time all amounts due in connection with the Tranche A Term Loans and any other amounts due under this Agreement shall be immediately due and payable. Tranche A Term Loans, once repaid, may not be borrowed. Borrower may prepay any Tranche A Term Loan without penalty or premium.

(v) Interest and Principal Payments on Tranche B Term Loan. Interest shall accrue from the date of the Tranche B Term Loan at the rate specified in Section 2.3(a), and prior to the Tranche B Term Loan Interest-Only End Date shall be payable monthly beginning on the 7th day of the month next following the Tranche B Term Loan, and continuing on the same day of each month thereafter. Any portion of the Tranche B Term Loan that is outstanding on the Tranche B Term Loan Interest-Only End Date shall be payable in equal monthly installments of principal, plus all accrued interest, beginning on the 7th day of the month immediately following the Tranche B Interest-Only End Date, and continuing on the same day of each month thereafter through the Term Loan Maturity Date, at which time all amounts due in connection with the Tranche B Term Loan and any other amounts due under this Agreement shall be immediately due and payable. The Tranche B Term Loan, once prepaid, may not be reborrowed. Borrower may repay the Tranche B Term Loan without penalty or premium.

(vi) When Borrower desires to obtain a Term Loan, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:30 p.m. Eastern time on the day on which the Term Loan is to be made. Such notice shall be substantially in the form of Exhibit C. The notice shall be signed by an Authorized Officer.

(c) Term Loan B

(i) Subject to and upon the terms and conditions of this Agreement, Bank agrees to make one (1) term loan to Borrower in an aggregate principal amount not to exceed Two Hundred Twenty-Five Thousand Dollars ($225,000) (the "Term Loan B"). The proceeds of the Term Loan B shall be used to repay in full Borrower's existing term loan with the North Carolina Biotechnology Center.

(ii) Interest shall accrue from the date of the Term Loan B at the rate specified in Section 2.3(a). On each of the one-year and two-year anniversaries of the closing Date, Borrower shall pay to Bank an amount equal to five percent (5%) of the principal amount of the Term Loan B outstanding on such date, plus all interest accrued but unpaid as of such date. On the Term Loan B Maturity Date all amounts due in connection with the Term Loan B and any other amounts due under this Agreement shall be immediately due and payable. The Term Loan B, once repaid, may not be reborrowed. Borrower may prepay the Term Loan B without penalty or premium.

(iii) Notwithstanding the foregoing, all outstanding principal, any accrued but unpaid interest, and any other amounts due in connection the Term Loan B shall be due and payable immediately upon the occurrence of any of the following events:

(A) Borrower sells, leases, transfers or otherwise disposes of all or substantially all of Borrower's assets, whether now owned or hereafter acquired; or

(B) Borrower takes any action that would result in a change in the direct or indirect control of 50% or more of the capital stock or equity interests of Borrower.

(iv) Borrower hereby requests that the Term Loan B be made on or about the closing Date. To document this request, Borrower shall deliver to Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:30 p.m. Eastern time on such date a notice substantially in the form of Exhibit C. The notice shall be signed by an Authorized Officer.

2.2 Intentionally Left Blank.

2.3 Interest Rates, Payments, and Calculations.

(a) Interest Rates.

(i) Term Loans. Except as set forth in Section 2.3(b), the Term Loans shall bear interest on the outstanding daily balance thereof, at a variable annual rate equal to the greater of: (A) 3.00% above the Prime Rate then in effect; or (B) 6.00%.

(ii) Term Loan B. Except as set forth in Section 2.3(b), the Term Loan B shall bear interest, on the outstanding daily balance thereof, at an annual rate equal to 4.25%.

(b) Late Fee; Default Rate. If any payment is not made within 15 days after the date such payment is due, Borrower shall pay Bank a late fee equal to the lesser of (i) 5% of the amount of such unpaid amount, or (ii) the maximum amount permitted to be charged under applicable law. All Obligations shall bear interest, from and after the occurrence and during the continuance of an Event of Default, at a rate equal to 5 percentage points above the interest rate applicable immediately prior to the occurrence of the Event of Default.

(c) Payments. Bank shall, at its option, charge any interest, all Bank Expenses, and all Periodic Payments against any of Borrower's deposit accounts. Any interest not paid when due shall be compounded by becoming a part of the Obligations, and such interest shall thereafter accrue interest at the rate then applicable hereunder.

(d) Computation. In the event the Prime Rate is changed from time to time hereafter, the applicable rate of interest hereunder shall be increased or decreased, effective as of the day the Prime Rate is changed, by an amount equal to such change in the Prime Rate. All interest chargeable under the Loan Documents shall be computed on the basis of a 360 day year for the actual number of days elapsed.

2.4 Crediting Payments. Prior to the occurrence of an Event of Default, Bank shall credit a wire transfer of funds, check or other item of payment to such deposit account or Obligation as Borrower specifies, except that to the extent Borrower uses the Term Loans to purchase Collateral, Borrower's repayment of the Term Loans shall apply on a "first-in-first-out" basis so that the portion of the Term Loans used to purchase a particular item of Collateral shall be paid in the chronological order the Borrower purchased the Collateral. After the occurrence and during the continuance of an Event of Default, Bank shall have the right, in its sole discretion, to immediately apply any wire transfer of funds, check, or other item of payment Bank may receive to conditionally reduce Obligations, but such applications of funds shall not be considered a payment on account unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Bank after 5:30 p.m. Eastern time shall be deemed to have been received by Bank as of the opening of business on the immediately following Business Day. Whenever any payment to Bank under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

2.5 Fees. Borrower shall pay to Bank the following:

(a) Success Fee. A fee equal to 2.5% of the aggregate principal amount of each Term Loan and Term Loan B advanced by Bank to Borrower, due on the day that such amount is advanced by Bank to Borrower. This Section 2.5(a) shall survive the termination of this Agreement.

(b) Bank Expenses. On the closing Date, all Bank Expenses incurred through the Closing Date, and, after the Closing Date. All bank Expenses, as and when they become due.

2.6 Major Grant Term Loan. In the event that Borrower receives an additional major grant not currently contemplated by this Agreement, Borrower may request an increase in the total aggregate Term Loans available under this Agreement. Bank shall be under no obligation whatsoever to consider or, if considered, approve any such request. However, in the event that Borrower and Bank both desire to increase the total aggregate Term Loans available under this Agreement, Borrower and Bank will work together to amend this Agreement to provide for such increase.

2.7 Term. This Agreement shall become effective on the Closing Date and, subject to Section 12.7, shall continue in full force and effect for so long as any Obligations remain outstanding or Bank has any obligation to make Credit Extensions under this Agreement. Notwithstanding the foregoing, Bank shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice upon the occurrence and during the continuance of an Event of Default.

3. CONDITIONS OF LOANS.S

3.1 Conditions Precedent to Closing. The agreement of Bank to enter into this Agreement on the Closing Date is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, each of the following items and completed each of the following requirements:

(a) This Agreement;

(b) an officer's certificate of Borrower with respect to incumbency and resolutions authorizing the executing and delivery of this Agreement;

(c) a financial statement (Form UCC-1);

(d) Borrower shall have opened and funded not less than $50,000 in deposit accounts held with Bank;

(e) the certificate(s) for the Shares, together with Assignment(s) separate from Certificates, duly executed by the pledger in blank;

(f) a payoff letter, in form and substance satisfactory to Bank, duly executed by the North Carolina Biotechnology Center;

(g) payment of the fees and Bank Expenses then due specified in Section 2.5, which may be debited from any of Borrower's accounts with Bank;

(h) current SOS Reports indicating that except for Permitted Liens, there are no other security interests of Liens of record in the collateral;

(i) current financial statements, including audited statements (or such other level required by the Investment Agreement) for Borrower's most recently ended fiscal year, together with an unqualified opinion (or an opinion qualified only for going concern so long as Borrower's investors provide additional equity as needed), company prepared

Consolidated and consolidating balance sheets, income statements, and statements of cash flows for the most recently ended month in accordance with Section 6.2, and such other updated financial information as Bank may reasonably request;

(j) current compliance Certificate in accordance with Section 6.2;

(k) A Warrant in form and substance satisfactory to Bank;

(l) A borrower Information Certificate;

(m) notification to Bank, as described in Section 2.1(c) of the Agreement, requesting Bank to make the Term Loan B to Borrower; and

(n) such other documents or certificates, and completion of such other matters, as Bank may reasonably request.

3.2 Conditions Precedent to all Credit Extensions. The obligation of Bank to make each Credit Extension, including the initial Credit Extension, is contingent upon the Borrower's compliance with Section 3.1 above, and is further subject to the following conditions:

(a) timely receipt by Bank of the Loan Advance/Paydown Request Form as provided in Section 2.1;

(b) Borrower shall have transferred substantially all of its Cash assets into operating accounts held with Bank and otherwise be in compliance with Section 6.6 hereof; and

(c) the representation and warranties contained in Section 5 shall be true and correct in all material respects on and as of the date of such Loan Advance/Paydown Request Form and on the effective date of each Credit Extension as though made at an as of each such date, and no Event of Default shall have occurred and be continuing, or would exist after giving effect to such Credit Extension (provided, however, that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such date). The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2.

4. CREATION OF SECURITY INTEREST.

4.1 Grant of Security Interest. Borrower grants and pledges to Bank a continuing security interest in the Collateral to secure prompt repayment of any and all Obligations and to secure prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except for Permitted Liens or Permitted Transfers or as disclosed in the Schedule, such security interest constitutes a valid, first priority security interest in the presently existing collateral, and will constitute a valid, first priority security interest in later-acquired Collateral. Borrower also hereby agrees not to sell, transfer, assign, mortgage, pledge, lease, grant a security interest in, or encumber any of its Intellectual Property, except for

Permitted Liens or Permitted Transfers. Notwithstanding any termination of the Agreement or of any filings undertaken related to Bank's rights under the Code, Bank's Lien on the collateral shall remain in effect for so long as any Obligations are outstanding.

4.2 Perfection of Security Interest. Borrower authorizes Bank to file any at time financing statements, continuation statements, and amendments thereto that (i) either specifically describe the Collateral or describe the Collateral as all assets of Borrower of the kind pledged hereunder, and (ii) contain any other information required by the Code for the sufficiency of filing office acceptance of any financing statement, continuation statement, or amendment, including whether Borrower is an organization, the type of organization and any organizational identification number issued to Borrower, if applicable. Borrower shall have possession of the collateral, except where expressly otherwise provided in this Agreement or where Bank chooses to perfect its security interest by possession in addition to the filing of a financing statement. Where Collateral is in possession of a third party bailee, Borrower shall take such steps as Bank reasonably requests for Bank to (i) subject to Section 7.10 below, obtain an acknowledgement, in form and substance satisfactory to Bank, of the bailee that the bailee holds such collateral for the benefit of Bank, and (ii) obtain "control" of any Collateral consisting of investment property, deposit accounts, letter-of-credit rights or electronic chattel paper (as such items and the term "control" are defined in Revised Article 9 of the Code) by causing the securities intermediary or depositary institution or issuing bank to execute a control agreement in form and substance satisfactory to Bank. Borrower will not create any chattel paper without placing a legend on the chattel paper acceptable t Bank indicating that Bank has a security interest in the chattel paper. Borrower from time to time may deposit with Bank specific cash collateral to secure specific Obligations. Borrower authorizes Bank to hold such specific balances in pledge and to decline to honor any drafts thereon or any request by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the specific Obligations are outstanding. Borrower shall take such other actions as Bank requests to perfect its security interests granted under this Agreement.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Bank a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Closing Date, the certificate or certificates for the Shares will be delivered to Bank, accompanied by an instrument of assignment duly governing the Shares. Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence of and Event of Default hereunder, Bank may effect the transfer of any securities included in the collateral (including but not limited to the Shares) into the name of Bank and cause new certificates representing such securities to be issued in the name of Bank or its transferee. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES.

Borrower represents and warrants as follows:

5.1 Due Organization and Qualifications. Borrower and each Subsidiary is a corporation duly existing under the laws of the state in which it is organized and qualified and licensed to do business in any state in which the conduct of its business or its ownership of property requires that it be so qualified, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.2 Due Authorization; No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's Certificate of Incorporation or Bylaws, not will they constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement by which it is bound, except to the extent such default would not reasonably be expected to cause a Material Adverse Effect.

5.3 Collateral. Borrower has rights in or the power to transfer the Collateral, and its title to the Collateral is free and clear of Lines, adverse claims, and restrictions on transfer or pledge except for Permitted Liens. Other than movable items of personal property such as laptop computers, all Collateral having an aggregate book value not in excess of $100,000 is located solely in the collateral States. All Inventory is in all material respects of good and merchantable quality, free from all material defects, except for Inventory for which adequate reserves have been made. Except as set forth in the Schedule, none of the Borrower's Cash is maintained or invested with a Person other than the Bank or Bank's affiliates.

5.4 Intellectual Property. Borrower is the sole owner of the intellectual property created or purchased by Borrower, except for licenses granted by Borrower to its customers in the ordinary course of business. To the best of Borrower's knowledge, each of the copyrights, Trademarks and Patents created or purchased by Borrower is valid and enforceable, and no part of the intellectual property created or purchased by Borrower has been judged invalid or unenforceable, in whole or in part, and no claim has been made to Borrower that any part of the intellectual property created or purchased by Borrower violates the rights of any third party except to the extent such claim would not reasonably be expected to cause a Material Adverse Effect.

5.5 Name; Location of Chief Executive Office. Except as disclosed in the Schedule, Borrower has not done business under any name other than that specified on the signature page hereof, and its exact legal name is as set forth in the first paragraph of this Agreement. The chief executive office of Borrower is located at the address indicated in Section 10 hereof.

5.6 Litigation. Except as set forth in the Schedule, there are no actions or proceedings pending by or against Borrower or any Subsidiary before any court or administrative agency in which a likely adverse decision would reasonably be expected to have a Material Adverse Effect.

5.7 No Material Adverse Change in Financial Statements. All consolidated and consolidating financial statements related to Borrower and any Subsidiary that are delivered by Borrower to Bank fairly present in all material respects Borrower's consolidated and consolidating financial condition as of the date thereof and Borrower's consolidated and consolidating results of operations for the period then ended. There has not been a material adverse change in the consolidated or in the consolidating financial condition of Borrower since the date of the most recent of such financial statements submitted to Bank.

5.8 Solvency, Payment of Debts. Borrower is able to pay its debts (including trade debts) as they mature; the fair saleable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; and Borrower is not left with unreasonably small capital after the transactions contemplated by this Agreement.

5.9 Compliance with Laws and Regulations. Borrower and each Subsidiary have met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. No event has occurred resulting from Borrower's failure to comply with ERISA that is reasonably likely to result in Borrower's incurring any liability that could have a Material Adverse Effect. Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment company Act of 1940. Borrower is not engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T and U of the Board of governors of the Federal Reserve System). Borrower has not violated any statutes, laws, ordinances or rules applicable to is, the violation of which would reasonably be expected to have a Material Adverse Effect. Borrower and each Subsidiary have filed or caused to be filed all tax returns required to be filed, and have paid, or have made adequate provision for the payment of, all taxes reflected therein except those being contested in good faith with adequate reserves under GAAP or where the failure to file such returns or pay such taxes would not reasonably be expected to have a Material Adverse Effect.

5.10 Subsidiaries. Borrower does not own any stock, partnership interest or other equity securities of any Person, except for Permitted Investments.

5.11 Government Consents. Borrower and each Subsidiary have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.12 Inbound Licenses. Except as disclosed on the Schedule, Borrower is not a party to, nor is bound by, and material license or other agreement important for the conduct of Borrower's business that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license or agreement or any other property important for the conduct of Borrower's business, other than this Agreement or the other Loan Documents.

5.13 Shares. Borrower has full power and authority to create a first lien on the Shares and no disability or contractual obligations exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. to Borrower's knowledge, there are no

subscriptions, warrants, rights of first refusal, or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will remain duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suite, action, arbitration, administrative or other proceedings, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.14 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Bank taken together with all such certificates and written statements furnished to Bank contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading in light of the circumstances in which they were made, it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not to be viewed as facts and that actual results during the period or periods covered by any such projections and forecasts may differ from the projected or forecasted results.

6. AFFIRMATIVE COVENANTS.

Borrower covenants that, until payment in full of all outstanding Obligations, and for so long as Bank may have any commitment to make a Credit Extension hereunder, Borrower shall do all of the following:

6.1 Good Standing and Government Compliance. Borrower shall maintain its and each of its Subsidiaries' corporate existence and good standing in the respective states of formation, shall maintain qualification and good standing in each other jurisdiction in which the failure to so qualify would reasonably be expected to have a Material Adverse Effect, and shall furnish to Bank the organizational identification number issued to Borrower by the authorities of the state in which Borrower is organized, if applicable. Borrower shall meet, and shall cause each Subsidiary to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply, and shall cause each Subsidiary to comply, with all statutes, laws, ordinances, and government rules and regulations to which it is subject, and shall maintain, and shall cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which or failure to comply with which would reasonably be expected to have a Material Adverse Effect.

6.2 Financial Statements, Reports, Certificates. Borrower shall deliver to Bank: (i) as soon as available, but in any event within 30 days after the end of each calendar month, a company prepared consolidated and consolidating balance sheet, income statement, and statement of cash flows covering Borrower's operations during such period, in a form reasonably acceptable to Bank and certified by a Responsible Officer; (ii) as soon as available, but in any event within 180 days after the end of Borrower's fiscal year, audited (or such other level as is required by the Investment Agreement) consolidated and consolidating financial statements of Borrower prepared in accordance with GAAP, consistently applied, together with an opinion which is either unqualified, qualified only for going concern so long as Borrower's investors provide additional equity as needed or otherwise consented to in writing by Bank on such financial statements of an independent certified public accounting firm reasonably acceptable to

Bank; (iii) an annual budget and product timeline, each approved by Borrower's Board of Directors, as soon as available but not later than 15 days after the beginning of each fiscal year of Borrower during the term of this Agreement; (iv) if applicable, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and all reports on Forms 10-K,and 10-Q filed with the Securities and Exchange Commission; (v) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened against Borrower or any Subsidiary that could reasonably be expected to result in damages or costs to Borrower or any Subsidiary of $250,000 or more; (vi) promptly upon receipt, each management letter prepared by Borrower's independent certified public accounting firm regarding Borrower's management control systems; and (vii) such budgets, sales projections, operating plans or other financial information generally prepared by Borrower in the ordinary course of business as Bank may reasonably request from time to time.

(a) Within 30 days after the last day of each month, Borrower shall deliver to Bank with the monthly financial statements a Compliance Certificate certified as of the last day of the applicable month and signed by a Responsible Officer in substantially the form of Exhibit D hereto.

(b) As soon as possible and in any event within 3 calendar days after becoming aware of the occurrence or existence of an Event of Default hereunder, Borrower shall deliver to Bank a written statement of a Responsible Officer setting forth details of the Event of Default, and the action which Borrower has taken or proposes to take with respect thereto.

(c) Bank (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours but no more than twice a year (unless an Event of Default has occurred and is continuing), to inspect Borrower's Books and to make copies thereof and to check, test, inspect, audit and appraise the collateral at Borrower's expense in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

Borrower may deliver to Bank on an electronic basis any certificates, reports or information required pursuant to this Section 6.2, and Bank shall be entitled to relay on the information contained in the electronic files, provided that Bank in good faith believes that the files were delivered by a Responsible Officer. Borrower shall include a submission date on any certificates and reports to be delivered electronically.

6.3 Inventory and Equipment; Returns. Borrower shall keep all Inventory and Equipment in good and merchantable condition, free from all material defects except for Inventory and Equipment (i) sold in the ordinary course of business, and (ii) for which adequate reserves have been made, in all cases in the United States and such other locations as to which Borrower gives prior written notice. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist on the Closing Date. Borrower shall promptly notify Bank of all returns and recoveries and of all disputes and claims involving inventory have a book value of more than $100,000.

6.4 Taxes. Borrower shall make, and cause each Subsidiary to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, including, but not limited to, those laws concerning income taxes, F.I.C.A., F.U.T.A. and state disability, and will execute and deliver to Bank, on demand, proof satisfactory to Bank indicating that Borrower or a Subsidiary has made such payments or deposits and any appropriate certificates attesting to the payment or deposit thereof; provided that Borrower or a Subsidiary need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is reserved against (to the extent required by GAAP) by Borrower or such Subsidiary.

6.5 Insurance. Borrower, at its expense, shall (i) keep the Collateral insured against loss or damage, and (ii) maintain liability and other insurance, in each case in as ordinarily insured against by other owners in businesses similar to Borrower's. All such policies of insurance shall be in such form, with such companies, and in such amounts as reasonably satisfactory to Bank. All policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Bank, showing Bank as an additional loss payee, and all liability insurance policies shall show Bank as an additional insured and specify that the insurer must give at least 20 days notice to Bank before canceling its policy for any reason. Within 30 days of the closing Date, Borrower shall cause to be furnished to Bank a copy of its policies or certificate of insurance including any endorsements covering Bank or showing Bank as an additional insured. Upon Bank's request, Borrower shall deliver to Bank certified copies of the policies of insurance and evidence of all premium payments. Proceeds payable under any casualty policy will, at Borrower's option, be payable to Borrower to replace the property subject to the claim, provided that any such replacement property shall be deemed Collateral in which Bank has been granted a first priority security interest, provided that if an Event of Default has occurred and is continuing, all proceeds payable under any such policy shall, at Bank's option, be payable to Bank to be applied on account of the Obligations.

6.6 "Primary Depository". Subject to the provisions of Section 3.1(d) and 3.2(b), Borrower within 30 days of the Closing Date shall maintain all its depository and operating accounts with Bank and its primary investment accounts with Bank or Bank's affiliates.

6.7 Financial Covenants. Borrower shall at all times maintain the following financial ratios and covenants:

(a) Cash Burn. Measured monthly as of the last day of each month, and calculated on an average trailing-three-months basis, a Cash Burn of not more than $225,000. Beginning with the 2013 fiscal year and continuing thereafter, monthly Cash Burn covenant levels shall be set by Bank based on Borrower's Board-approved operating plan for the applicable year, which Borrower shall deliver to Bank on or before January 15 of the applicable year, and incorporated into this Agreement through a written amendment, which Bank and Borrower hereby agree to execute promptly.

(b) Term Sheet Milestone. Borrower shall have achieved the Term Sheet Milestone.

(c) Warrant Milestone. Upon requesting the Tranche B Term Loan, Borrower shall deliver to Bank a fully executed warrant in substantially the form of Exhibit E attached hereto. The initial exercise price of such warrant shall be the lowest price per share paid by investors in Borrower's most recent issuance, prior to the date of such request, of Borrower's preferred equity securities.

In addition to the foregoing covenants, Bank shall in the future set milestone covenants based upon Borrower's Board-approved annual budget and product timeline, which shall be provided to Bank pursuant to Section 6.2(iii) herein, and incorporated into this Agreement through a written amendment, which Bank and Borrower hereby agree to execute promptly.

6.8 Consent of Inbound Licensors. Prior to entering into or becoming bound by any material inbound license or agreement, Borrower shall: (i) provide written notice to Bank of the material terms of such license or agreement with a description fits likely impact on Borrower's business or financial condition; and (ii) in good faith use commercially reasonable efforts to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for Borrower's interest in such licenses or contract rights to be deemed Collateral and for Bank to have a security interest in it that might otherwise be restricted by the terms of the applicable license or agreement, whether now existing or entered into in the future, provided, however, that the failure to obtain any such consent or waiver shall not constitute a default under this Agreement.

6.9 Creation/Acquisition of Subsidiaries. In the event any Borrower or any Subsidiary of any Borrower creates or acquires any Subsidiary, Borrower or such Subsidiary shall promptly notify Bank of such creation or acquisition, and Borrower or such Subsidiary shall take all actions reasonably requested by Bank to achieve any of the following with respect to such "*New Subsidiary*" (defined as a Subsidiary formed after the date hereof during the term of this Agreement): (i) to cause such New Subsidiary to become either a co-Borrower hereunder, if such New Subsidiary is organized under the laws of the United States, or a secured guarantor with respect to the Obligations; and (ii) to grant and pledge to Bank a perfected security interest in 100% of the stock, units or other evidence of ownership held by Borrower or its Subsidiaries of any such New Subsidiary which is organized under the laws of the United States, and 65% of the stock, units or other evidence of ownership held by Borrower or its Subsidiaries of any such New Subsidiary which is not organized under the laws of the United States.

6.10 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Bank to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS.

Borrower covenants and agrees that, so long as any credit hereunder shall be available and until the outstanding Obligations are paid in full or for so long as Bank may have any commitment to make any Credit Extensions, Borrower will not do any of the following without Bank's prior written consent, which shall not be unreasonably withheld:

7.1 Dispositions. Convey, sell, lease, license, transfer or otherwise dispose of)collectively, to "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, or move cash balances on deposit with Bank to accounts opened at another financial institution, other than Permitted Transfers.

7.2 Change in Name, Location, Executive Office, or Executive Management; Change in Business; Change in Fiscal Year; Change in Control. Change its name or the state of Borrower's formation or relocate its chief executive office without 30 days prior written notification to Bank; replace or suffer the departure of its chief executive officer or chief financial officer without delivering written notification to Bank within 10 days; fail to appoint an interim replacement or fill a vacancy in the position of chief executive officer of chief financial officer for more than 30 consecutive days; suffer a change on its board of directors which results in the failure of at least one partner of Brightline Ventures of its Affiliates to serve as a voting member, or suffer the resignation of one or more directors from its board of directors in anticipation of Borrower's insolvency, in each case without the prior written consent of Bank which may be withheld in Bank's sole discretion; take action to liquidate, wind up, or otherwise cease to conduct business of the ordinary course; engage in any business, or permit any of its Subsidiaries to engage in any business, other than or reasonably related or incidental to the businesses currently engaged in by Borrower; change its fiscal year end; have a Change in Control.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of a Subsidiary into another Subsidiary or into Borrower), or acquire,, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person except where (a) each of the following conditions is applicable: (i) the consideration paid in connection with such transactions (including assumption of liabilities) does not in the aggregate exceed $250,000 during any fiscal year, (ii) no Event of Default has occurred, is continuing or would exist after giving effect to such transactions, (iii) such transactions do not result in a Change in Control, and (iv) Borrower is the surviving entity; or (b) the Obligations are repaid in full concurrently with the closing of any merger or consolidation of Borrower in which Borrower is not the surviving entity; provided, however, that Borrower shall not, without Bank's prior written consent, enter into any binding contractual arrangements with any Person to attempt to facilitate a merger or acquisition of Borrower; provided however, Borrower may enter into any such agreement without Bank's prior written consent so long as (i) no Event of Default exists when such agreement is entered into by Borrower, (ii) such agreement does not give such Person the right to claim any fee, payment or damages from any parties, other than from Borrower or Borrower's investors, in connection with a sale of Borrower's stock or assets pursuant to or resulting from an assignment for the benefit of creditors, an asset turnover to Borrower's creditors (including, without limitation, Bank), foreclosure, bankruptcy or similar liquidation, and (iii) Borrower notifies Bank in advance of entering into such an agreement (provided the failure to give such notification shall not be deemed a material breach of this Agreement).

7.4 Indebtedness. Create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted

Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except Indebtedness to Bank.

7.5 Encumbrances. Create, incur, assume or allow any Lien with respect to its property, or assign or otherwise convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries so to do, except for Permitted Liens, or covenant to any other Person (other than (i) the licensors of in-licensed property with respect to such property or (ii) the lessors of specific equipment or lenders financing specific equipment with respect to such leased or financed equipment) that Borrower in the future will refrain from creating, incurring, assuming or allowing any Lien with respect to any of Borrower's property.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock, except that Borrower may (i) repurchase the stock of former employees pursuant to stock repurchase agreements as long as an Event of Default does not exist prior to such repurchase or would not exist after giving effect to such repurchase, and (ii) repurchase the stock of former employees pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees to Borrower regardless of whether an Event of Default exists.

7.7 Investments. Directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments, or maintain or invest any of its Investment Property with a Person other than Bank or Bank's Affiliates or permit any Subsidiary to do so unless such Person has entered into a control agreement with Bank, in form and substance satisfactory to Bank, or suffer or permit any Subsidiary to be a party to, or be bound by, and agreement that restricts such Subsidiary from payment dividends or otherwise distributing property to Borrower.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person; provided, however, that Borrower may enter into exclusive licenses for the use of Borrower's intellectual property by a Subsidiary, so long as such Subsidiary is a co-borrower under this Agreement.

7.9 Subordinated Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt, or amend any provision affecting Bank's rights contained in any documentation relating to the Subordinated Debt without Bank's prior written consent.

7.10 Inventory and Equipment. Store the Inventory of the Equipment of a book value in excess of $100,000 with a bailee, warehouseman, collocation facility or similar third party unless the third party has been notified of Bank's security interest and Bank (a) has received an acknowledgement from the third party that it is holding or will hold the Inventory or Equipment for Bank's benefit or (b) is in possession of the warehouse receipt, where negotiable, covering such Inventory or Equipment. Except for Inventory sold in the ordinary course of business and for movable items of person property having an aggregate book value not in

excess of $100,000, and except for such other locations as Bank may approve in writing, Borrower shall keep the Inventory and Equipment only at the location set forth in Section 10 and such other locations of which Borrower gives Bank prior written notice and as to which Bank is able to take such actions as may be necessary to perfect its security interest or to obtain a bailee's acknowledgment of Bank's rights in the Collateral.

7.11 No Investment Company; Margin Regulation. Become or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose.

8. EVENT OF DEFAULT.

Any one of more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay any of the Obligations when due;

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Sections 6.2 (financial reporting), 6.4 (taxes), 6.5 (insurance), 6.6 (primary accounts), or 6.7 (financial covenants), or violates any of the covenants contained in Article 7 of this Agreement; or

(b) If Borrower fails or neglects to perform or observe any other material term, provision, condition, or covenant contained in this Agreement, in any of the Loan documents, or in any other present or future agreement between Borrower and Bank and as to any default under such other term, provision, condition or covenant that can be cured, has failed to cure such default within 15 days after Borrower receives notice thereof or any officer of Borrower becomes aware thereof; provided, however, that if the default cannot by its nature be cured within the 15 day period or cannot after diligent attempts by Borrower be cured within such 15 day period, and such default is likely to be cured within a reasonable time, the Borrower shall have an additional reasonable period (which shall not in any case exceed 30 days) to attempt to cure such default, and within such reasonable time period the failure to have cured such default shall not be deemed an Event of Default but no Credit Extensions will be made.

8.3 Material Adverse Change. If there occurs any circumstance or any circumstances which would reasonably be expected to have a Material Adverse Effect;

8.4 Attachment. If any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within 10 days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all of any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy

or assessment is filed of record with respect to any material portion of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, country, municipal, or governmental agency, and the same is not paid within ten days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be made during such cure period).

8.5 Insolvency. If Borrower becomes insolvent, or if an Insolvency Proceeding is commenced by Borrower, or an Insolvency Proceeding is commenced against Borrower and is not dismissed or stayed within 30 days (providing that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.6 Other Agreements. If there is a default or other failure to perform in nay agreement to which Borrower is a party with a third party of parties (a) resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any indebtedness in an amount in excess of $250,000 (b) in connection with any lease of real property or (c) that would reasonably be expected to have a material Adverse Effect;

8.7 Judgments. If a final, uninsured judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least $250,000 shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of 10 days (provided that no Credit Extensions will be made prior to the satisfaction or stay of the judgment); or

8.8 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in ay warranty or representation set forth herein or in nay certificate delivered to Bank by any Responsible Officer pursuant to this Agreement or to induce Bank to enter into this Agreement or any other Loan Document.

9. BANK'S RIGHTS AND REMEDIES.

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence of an Event of Default described in Section 8.5 (insolvency), all Obligations shall become immediately due and payable without any action by Bank);

(b) Demand that Borrower (i) deposit cash with Bank in an amount equal to the amount of any Letters of Credit remaining undrawn, as collateral security for the repayment of any future drawings under such Letters of Credit, and (ii) pay in advance all Letter of Credit fees scheduled to be paid or payable over the remaining term of the Letters of Credit, and Borrower shall promptly deposit and pay such amounts;

(c) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Bank;

(d) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order that Bank reasonably considers advisable;

(e) Make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the collateral. Borrower agrees to assemble the collateral if Bank so requires, and to make the collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest or compromise any encumbrance, charge, or lien which in Bank's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Bank a license to enter into possession of such premises and to occupy the same, without charge, in order to exercise any of Bank's rights or remedies provided herein, at law, in equity, or otherwise;

(f) Set off and apply to the Obligations any and all (i) balances and deposits of Borrower held by Bank, and (ii) indebtedness at any time owing to or for the credit or the account of Borrower held by Bank;

(g) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Bank is hereby granted a license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Bank's benefit;

(h) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Bank determines its commercially reasonable, and apply any proceeds to the Obligations in whatever manner or order Bank deems appropriate. Bank may sell the Collateral without giving any warranties as to the Collateral. Bank may specifically disclaim any warranties of title or the like. This procedure will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. If Bank sells any of the Collateral upon credit, Borrower will be credited only with payments actually made by the purchaser, received by Bank, and applied to the indebtedness of the purchaser. If the purchaser fails to pay for the Collateral, Bank may resell the collateral and Borrower shall be credited with the proceeds of the sale;

(i) Bank may credit bid and purchase at any public sale;

(j) Apply for the appointment of a receiver, trustee, liquidator or conservator of the Collateral, without notice and without regard to the adequacy of the security for the Obligations and without regard to the solvency of Borrower, any guarantor or any other Person liable for any of the Obligations; and

(k) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

Bank may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral.

9.3 Accounts Collection. At any time after the occurrence and during the continuation of an Event of Default, Bank may notify and Person owing funds to Borrower of Bank's security interest in such funds and verify the amount of such Account. Borrower shall collect all amounts owing to Borrower for Bank, receive in trust all payments as Bank's trustee, and immediately deliver such payments to Bank in their original form as received form the Account debtor, with proper endorsements for deposit.

9.4 Bank Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Bank may do any or all of the following after reasonable notice to Borrower: (a) make payment of the same or any part thereof; and/or (b) obtain and maintain insurance policies of the type discussed in Section 6.5 of this Agreement, and take any action with respect to such policies as Bank deems prudent. Any amounts so paid or deposited by Bank shall constitute Bank Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Bank shall not constitute an agreement by Bank to make similar payments in the future or a waiver by Bank of any Event of Default under this Agreement.

9.5 Bank's Liability for Collateral. Bank has no obligation to clean up or otherwise prepare the Collateral for sale. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 No Obligation to Pursue Others. Bank has no obligation to attempt to satisfy the Obligations by collecting them from any other person liable for them and Bank may release, modify or waive any collateral provided by any other Person to secure any of the Obligations, all without affecting Bank's rights against Borrower. Borrower waives any right it may have to require Bank to pursue any other Person for any of the Obligations.

9.7 Remedies Cumulative. Bank's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Bank shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election, or acquiescence by it. No waiver by Bank shall be effective unless made in a written document signed on behalf of Bank and then shall be effective only in the specific instance and for the specific purpose for which it was given. Borrower expressly agrees that this Section 9.7 may not be waived or modified by Bank by course of performance, conduct, estoppel or otherwise.

9.8 Demand; Protest. Except as otherwise provided in this Agreement, Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment and any other notices relating to the Obligations.

10. NOTICES.

Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid) shall be personally delivered or sent by a recognized overnight delivery service, certified mail, postage prepaid, return receipt requested, or by telefacsimile to Borrower or to Bank, as the case may be, at its addresses set forth below.

If to Borrower:	Heat Biologics, Inc. 100 Europa Drive, Suite 420 Chapel Hill, NC 27517 Attn: Jeffrey Wolf, CEO FAX:_____
If to Co-Borrower:	Heat Biologics I, Inc. 100 Europa Drive, Suite 420 Chapel Hill, NC 25517 Attn: Jeffrey Wolf, CEO FAX:_____
If to Bank:	Square 1 Bank 406 Blackwell Street, Suite 240 Durham, North Carolina 27701 Attn: Loan Operations Manager

FAX: (919) 314-3080

with a copy to: Square 1 Bank
406 Blackwell Street, Suite 240
Durham, NC 27701
Attn: Mara Huntington
FAX: (919) 314-3110

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER.

This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of North Carolina, without regard to principles of conflicts of law. Jurisdiction shall lie in the State of North Carolina. All disputes, controversies, claims, actions and similar proceedings arising with respect to Borrower's account or any related agreement or transaction shall be brought in the General Court of Justice of North Carolina sitting in Durham County, North Carolina or the United States District Court for the Middle district of North Carolina, except as provided below with respect to arbitration of such matters. BANK AND BORROWER EACH ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED. EACH OF THENM, AFTER CONSULTING OR HAVING HAD THE OPPORTUNITY TO CONSULT WITH COUNSEL OF THEIR CHOICE, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ANY RIGHT ANY OF THEM MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY RELATED INSTRUMENT OR LOAN DOCUMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT OR ANY COURSE OF CONDUCT, DEALING, STATEMENTS (WHETHER ORAL OR WRITTEN), OR ACTION OF ANY OF THEM THESE PROVISIONS SHALL NOT BE DEEMED TO HAVE BEEN MODIFIED IN ANY RESPECT OR RELINQUISHED BY BANK OR BORROWER, EXCEPT BY A WRITTEN INSTRUMENT EXECUTED BY EACH OF THEM. If the jury waiver set forth in this Section 11 is not enforceable, then any dispute, controversy, claim, action or similar proceeding arising out of or relating to this Agreement, the Loan Documents or any of the transactions contemplated therein shall be settled by final and binding arbitration held in Durham County, North Carolina in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association by one arbitrator appointed in accordance with those rules. The arbitrator shall apply North Carolina law to the resolution of any dispute, without reference to rules of conflicts of law or rules of statutory arbitration, Judgment upon any award resulting from arbitration may be entered into and enforced by any state or federal court having jurisdiction thereof. Notwithstanding the foregoing, the parties may apply to any court of competent jurisdiction for preliminary or interim equitable relief, or to compel arbitration in accordance with this Section. The costs and expenses of the arbitration, including without limitation, the arbitrator's fees and expert witness fees, and reasonable attorneys' fees, incurred by the parties to the arbitration may be awarded to the prevailing party, in the discretion of the arbitrator, or may be apportioned between the parties in any manner deemed appropriate by the arbitrator. Unless and until the arbitrator decides that one party is to pay for all (or a share) of such costs and expenses, both parties shall share equally in

the payment of the arbitrator's fees as and when billed by the arbitrator.

12. GENERAL PROVISIONS.

12.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties and shall bind all persons who become bound as a debtor to this Agreement; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Bank's prior written consent, which consent may be granted or withheld in Bank's sole discretion. Bank shall have the right without the consent of or notice to Borrower to sell, assign, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights and benefits hereunder.

12.2 Indemnification. Borrower shall defend, indemnify and hold harmless Bank and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement; and (b) all losses or Bank Expenses in any way suffered, incurred, or paid by Bank, its officers, employees and agents as a result of or in any way arising out of, following, or consequential to transactions between Bank and Borrower whether under this Agreement, or otherwise (including without reasonable attorneys fees and expenses), except for losses cause by Bank's gross negligence or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.5 Amendments in Writing, Integration. All amendments to or terminations of this Agreement or the other Loan Documents must be in writing. All prior agreements, understandings, representations, warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement and the other Loan Documents, if any, are merged into this Agreement and the Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement. Executed copies of the signature pages of this Agreement sent by facsimile or transmitted electronically in Portable Document Format ("PDF"), or any similar format, shall be treated as originals, fully binding and with full legal force and effect, and the parties waive any rights they may have to object to such treatment.

12.7 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations remain outstanding or Bank has any obligation to make any Credit Extension to Borrower. The obligations of Borrower to indemnify Bank with respect to the expenses, damages, losses, costs and liabilities

described in Section 12.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Bank have run.

12.8 Confidentiality. In handling any confidential information, Bank and Borrower and all employees and agents of such party shall exercise the same degree of care that such party exercises with respect to its own proprietary information of the same types to maintain the confidentiality of any non-public information thereby received or received pursuant to this Agreement except that disclosure of such information may be made (i) in the case of Bank, to the subsidiaries of Affiliates of Bank or Borrower in connection with their present or prospective business relations with Borrower, (ii) in the case of Bank, to prospective transferees or purchasers of any interest in the Credit Extensions, provided that they have entered into a comparable confidentiality agreement in favor of Borrower and have delivered a copy to Borrower, (iii) as required by law, regulations, rule or order, subpoena, judicial order or similar order, (iv) in the case of Bank, as may be required in connection with the examination, audit or similar investigation of Bank and (v) as Bank may determine in connection with the enforcement of any remedies hereunder. Confidential information hereunder shall not include information that either: (a) is in the public domain or in the knowledge or possession of the receiving party when disclosed to such party, or becomes part of the public domain after disclosure to such receiving party through no fault of such receiving party; or (b) is disclosed to such receiving party by a third party, provided such receiving party does not have actual knowledge that such third party is prohibited from disclosing such information.

13. CO-BORROWER PROVISION.

13.1 Primary Obligation. This Agreement is a primary and original obligation of each Borrower and shall remain in effect notwithstanding future changes in conditions, including any change of law or any invalidity or irregularity in the creation or acquisition of any Obligations or in the execution or delivery of any agreement between Bank and Borrower. Each Borrower shall be liable for existing and future Obligations as fully as if all of all Credit Extensions were advanced to such Borrower. Bank may rely on any certificate or representation made by any Borrower as made on behalf of, and binding on, all Borrowers, including without limitation disbursement Request Forms, Borrowing Base Certificates and compliance Certificates.

13.2 Enforcement of Rights. Borrowers are jointly and severally liable for the Obligations and Bank may proceed against one or more of the Borrowers to enforce the Obligations without waiving its right to proceed against any of the other Borrowers.

13.3 Borrowers as Agents. Each Borrower appoints the other Borrower as its agent with all necessary power and authority to give and receive notices, certificates or demands for and on behalf of both Borrowers, to act as disbursing agent for receipt of any Credit Extensions on behalf of each Borrower and to apply to Bank on behalf of each Borrower for Credit Extensions, any waivers and any consents. This authorization cannot be revoked, and Bank need not inquire as to each Borrower's authority to act for or on behalf of Borrower.

13.4 Subrogation and Similar Rights. Notwithstanding any other provision of this Agreement or any other Loan Document, each Borrower irrevocably waives all rights that

it may have at law or in equity (including, without limitation, any law subrogating the Borrower to the rights of Bank under the Loan Documents) to seek contribution, indemnification, or any other form of reimbursement from any other Borrower, or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by the Borrower with respect to the Obligations in connection with the Loan Documents or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by the Borrower with respect to the Obligations in connection with the Loan Documents or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section 13.4, shall be null and void. If any payment is made to a Borrower in contravention of this Section 13.4, such Borrower shall hold such payment in trust for Bank and such payment shall be promptly delivered to Bank for application to the Obligations, whether matured or unmatured.

13.5 Waivers of Notice. Except as otherwise provided in this Agreement, each Borrower waives notice of acceptance hereof; notice of the existence, creation or acquisition of any of the Obligations; notice of an Event of Default; notice of the amount of the Obligations outstanding at any time; notice of intent to accelerate; notice of acceleration; notice of any adverse change in the financial condition of any other Borrower or of any other fact that might increase the Borrower's risk; presentment for payment; demand; protest and notice thereof as to any instrument; default; and all other notices and demands to which the Borrower would otherwise be entitled. Each Borrower waives any defense arising from and defense of any other Borrower, or by reason of the cessation from any cause whatsoever of the liability of any other Borrower. Bank's failure at any time to require strict performance by any Borrower of any provision of the Loan documents shall not waive, alter or diminish any right of Bank thereafter to demand strict compliance and performance therewith. Nothing contained herein shall prevent Bank from foreclosing on the Lien of any deed of trust, mortgage or other security instrument, or exercising any rights available thereunder, and the exercise of any such rights shall not constitute a legal or equitable discharge of any Borrower. Each Borrower also waives any defense arising from any act or omission of Bank that changes the scope of the Borrower's risks hereunder.

13.6 Subrogation Defenses. Each Borrower hereby waives any defense based on impairment or destruction of its subrogation or other rights against any other Borrower and waives all benefits which might otherwise be available to is under any statutory or common law suretyship defenses or marshaling rights, now and hereafter in effect.

13.7 Right to Settle, Release.

(a) the liability of Borrowers hereunder shall not be diminished by (i) any agreement, understanding or representation that any of the Obligations is or was to be guaranteed by another Person or secured by other property, or (ii) any release or unenforceability, whether partial or total, of rights, if any, which Bank may now or hereafter have against any other Person, including another Borrower, or property with respect to any of the Obligations.

(b) Without affecting the liability of any Borrower hereunder, Bank may (i) compromise, settle, renew, extend the time for payment, change the manner of terms of payment, discharge the performance of, decline to enforce, or release all or any of the

Obligations with respect to a Borrower, (ii) grant other indulgences to a Borrower in respect of the Obligations, (iii) modify in any manner any documents relating to the Obligations with respect to a Borrower, (iv) release, surrender or exchange any deposits or other property securing the Obligations, whether pledged by a Borrower or any other Person, or (v) compromise, settle, renew, or extend the time for payment, discharge the performance of, decline to enforce, or release all or any obligations of any guarantor, endorser or other Person who is now or may hereafter be liable with respect to any of the Obligations.

13.8 Subordination. All indebtedness of a Borrower now or hereafter arising held by another Borrower is subordinated to the Obligations and the Borrower holding the indebtedness shall take all actions reasonably requested by Bank to effect, to enforce and to give notice of such subordination.

****

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf

Name: Jeffrey Wolf

Title: CEO

HEAT BIOLOGICS I, INC.

By: /s/ Jeffrey Wolf

Name: Jeffrey Wolf

Title: CEO

SQUARE 1 BANK

By: _____

Name: _____

Title: _____

EXHIBIT A

DEFINITIONS

"Accounts" means all presently existing and hereafter arising accounts, contract rights, payment intangibles and all other forms of obligations owing to Borrower arising out of the sale or lease of goods (including, without limitation, the licensing of software and other technology) or the rendering of services by Borrower and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower's Books relating to any of the foregoing.

"Affiliate" means, with respect to any Person, and Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and each of such Person's senior executive officers, directors, and general partners.

"Authorized Officer" means someone designated as such in the corporate resolution provided by Borrower to Bank in which this Agreement and the transactions contemplated hereunder are authorized by Borrower's board of directors. If Borrower provides subsequent corporate resolutions to Bank after the Closing Date, the individual(s) designated as "Authorized Officer(s)" in the most-recently provided resolution shall be the only "Authorized Officers" for purposes of this Agreement.

""Bank Expenses" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; reasonable Collateral audit fees; and Bank's reasonable attorneys' fees and expenses (whether generated in-house or by outside counsel) incurred in amending, enforcing or defending the Loan Document (including fees and expenses of appeal) incurred before, during and after an Insolvency Proceeding, whether or not suit is brought.

"Borrower's Books" means all of Borrower's books and records including: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

"Business Day" means any day that is not a Saturday, Sunday, or other day on which banks in the State of North Carolina are authorized or required to close.

"Cash" means unrestricted cash and cash equivalents.

"Cash Burn" means an amount equal to the prior period's Cash minus the current period's ending Cash that has been adjusted for any changes to Cash as a result of borrowings and repayments of borrowings, proceeds from the sale of equity and the exercise of stock options or warrants, and paid-in-capital and minority interest.

"Change in Control" means a transaction other than a bona fide equity financing of series of financings on terms and from investors reasonably acceptable to Bank in which any "person" or "group" (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934) becomes the "beneficial owner" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of a sufficient number of shares of all classes of stock then outstanding of Borrower ordinarily entitled to vote in the election of directors, empowering such "person" or "group" to elect a majority of the Board of Directors of Borrower, who did not have such power before such transaction.

"Closing Date" means the date of this Agreement.

"Code" means the North Carolina Uniform Commercial Code as amended or supplemented from time to time.

"Collateral" means the property described on Exhibit B attached hereto and all Negotiable Collateral to the extent not described on Exhibit B, except to the extent any such property (i) is non-assignable by its terms without the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, §25-9-406 and §25-9-408 of the Code), (ii) in which the granting of a security interest is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically become part of the Collateral, (iii) constitutes the capital stock of a controlled foreign corporation (as defined in the IRC), in excess of 65% of the voting power of all classes of capital stock of such controlled foreign corporations entitled to vote, or (iv) is property (including any attachments, accessions, or replacements) that is subject to a Lien that is permitted pursuant to clause (c) of the definition of Permitted Liens, if the grant of a security interest with respect to such property pursuant to this Agreement would be prohibited by the agreement creating such Permitted Lien or would otherwise constitute a default thereunder, provided, that such property will be deemed "Collateral" hereunder upon the termination and release of such Permitted Lien.

"Collateral State" means the state or states where the Collateral is located, which is North Carolina.

"Contingent Obligation" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by the Person, or in respect of which that Person is otherwise directly or indirectly liable; (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices: provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith: provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Copyrights" means any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held.

"Credit Extension: means each Term Loan, the Term Loan B or any other extension of credit, by Bank to or for the benefit of Borrower hereunder.

"Equipment" means all present and future machinery, equipment, tenant improvements, furniture, fixtures, vehicles, tools, parts and attachments in which Borrower has any interest.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

"Event of Default" has the meaning assigned in Article 8.

"GAAP" means generally accepted accounting principles, consistently applied, as in effect from time to time in the United States.

"Grant Event" means Borrower's receipt, after the Closing Date but on or before the Tranche A Term Loan Availability End Date, or a grant, with funds to be provided to Borrower in a series of disbursements but with an aggregate value of at least $16,000,000, for the purpose of funding product development.

"Indebtedness" means (a) all indebtedness for borrowed money or the deferred purchase price of property or services, including without limitation reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all contingent Obligations, including but not limited to any sublimit contained herein.

"Insolvency Proceeding" means any proceeding commenced by or against any Person or entity under any provision of the United States Bankruptcy code, as amended, or under any other bankruptcy or insolvency law including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension general with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"Inventory" means all present and future inventory in which Borrower has any interest.

"Investment" means any beneficial ownership of (including stock, partnership or limited liability company interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"Investment Agreement" means, collectively, Borrower's stock purchase and other agreement(s) pursuant to which Borrower most recently issued its preferred stock.

"IRC" means the Internal Revenue Code of 1986, as amended, and the regulations thereunder.

"Letter of Credit" means a commercial or standby letter of credit or similar undertaking issued by Bank at Borrower's request.

"Lien" means any mortgage, lien, deed of trust, charge, pledge, security interest or other encumbrance.

"Loan Documents" means, collectively, this Agreement, any note or notes executed by Borrower, and any other document, instrument or agreement entered into in connection with this Agreement, all as amended or extended from time to time.

"Material Adverse Effect" means a material adverse effect on: (i) the operations, business or financial condition of Borrower and its Subsidiaries taken as a whole; (ii) the ability of Borrower to repay the Obligations or otherwise perform its obligations under the Loan Documents, or (iii) Borrower's interest in, or the value, perfection or priority of Bank's security interest in the Collateral.

"Negotiable Collateral" means all of Borrower's present and future letters of credit of which it is a beneficiary, drafts, instruments (including promissory notes), securities, documents of title, and chattel paper, and Borrower's Books relating to any of the foregoing.

"Obligations" means all debt, principal, interest, Bank Expenses and other amounts owed to Bank by Borrower pursuant to this Agreement or any other agreement, whether absolute or contingent, due or to become due, now existing or hereafter arising, including any interest that accrues after the commencement of an Insolvency Proceeding and including any debt, liability, or obligation owing from Borrower to others that Bank may have obtained by assignment or otherwise.

"Patents" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

"Periodic Payments" means all installments or similar recurring payments that Borrower may now or hereafter become obligated to pay to Bank pursuant to the terms and provisions of any instrument, or agreement now or hereafter in existence between Borrower and Bank.

"Permitted Indebtedness" means:

(a) Indebtedness of Borrower in favor of Bank arising under this Agreement or any other Loan Document;

(b) Indebtedness existing on the Closing Date and disclosed in the Schedule;

(c) Indebtedness not to exceed $250,000 in the aggregate in any fiscal year of Borrower secured by a lien described in clause (c) of the defined term "Permitted Liens," provided such Indebtedness does not exceed at the time it is incurred the lesser of the cost or fair market value of the property financed with such indebtedness;

(d) Subordinated Debt;

(e) Indebtedness to Lonza Walkersville, Inc. ("Lonza") pursuant to (i) that certain Convertible Promissory Note issued by Borrower in favor of Lonza and (ii) that certain Manufacturing Services Agreement between Lonza and Borrower, each in substantially the form provided to Bank on or before the Closing Date (collectively, the "Lonza Agreements"); provided that Borrower shall provide advance notice to Bank of any material change to the Lonza Agreements;

(f) Indebtedness to trade creditors incurred in the ordinary course of business; and

(g) Extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

"Permitted Investment" means:

(a) Investments existing on the closing Date disclosed in the Schedule.

(b) (i) Marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from the date of acquisition thereof, (ii) commercial paper maturing no more than one year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation of Moody's Investors Service, (iii) Bank's certificates of deposit maturing no more than one year from the date of investment therein, (iv) Bank's money market accounts, (v) Investments in regular deposit or checking accounts held with Bank or subject to a control agreement in favor of Bank, and (vi) Investments consistent with any investment policy adopted by the Borrower's board of directors.

(c) Repurchases of stock from former employees or directors of Borrower under the terms of applicable repurchase agreements (i) in an aggregate amount not to exceed $150,000 in any fiscal year, provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases, or (ii) in any amount where the consideration for the repurchase is the cancellation of indebtedness owed by such former

employees to Borrower regardless of whether an Event of Default exists;

(d) Investments accepted in connection with Permitted Transfers;

(e) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in Subsidiaries not to exceed $150,000 in the aggregate in any fiscal year;

(f) Investments not to exceed $150,000 outstanding in the aggregate at any time consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plan agreements approved by Borrower's Board of Directors;

(g) Investments in unfinanced capital expenditures in any fiscal year, not to exceed $150,000;

(h) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower's business;

(i) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this subparagraph (i) shall not apply to Investments of Borrower in any Subsidiary;

(j) Joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by Borrower do not exceed $150,000 in the aggregate in any fiscal year; and

(k) Investments permitted under Section 7.3

"Permitted Liens" means the following:

(a) Any Liens existing on the Closing Date and disclosed in the Schedule (excluding Liens to be satisfied with the proceeds of the Credit Extensions) or arising under this Agreement, the other Loan Documents, or any other agreement in favor of Bank;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings and for which Borrower maintains adequate reserves;

(c) Liens not to exceed $250,000 in the aggregate in any fiscal year of Borrower (i) upon or in any Equipment (other than Equipment financed by a Credit Extension) acquired or held by Borrower or any of its Subsidiaries to secure the purchase price of such Equipment of indebtedness incurred solely for the purpose of financing the acquisition or lease of such Equipment, or (ii) existing on such Equipment at the time of its acquisition, in each case provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such Equipment;

(d) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (c) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase;

(e) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 (attachment) or 8.7 (judgments); and

(f) Liens securing Subordinated Debt.

"Permitted Transfer" means the conveyance, sale, lease, transfer or disposition by Borrower or any Subsidiary of:

(a) Inventory in the ordinary course of business;

(b) licenses and similar arrangements for the use of the property of Borrower of its Subsidiaries in the ordinary course of business;

(c) worn-out, surplus or obsolete Equipment not financed with the proceeds of Credit Extensions;

(d) grants of security interests and other Liens that constitute Permitted Liens; and

(e) Cash transferred to pay payroll and benefits, trade payables and other day-to-day operating expenses of Borrower in the ordinary course of business;

(f) exclusive licenses for the use of Borrower's intellectual property to a Subsidiary in the ordinary course of business, so long as such Subsidiary is a co-borrower under this Agreement;

(g) other assets of Borrower or its Subsidiaries that do not in the aggregate exceed $150,000 during any fiscal year.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

"Prime Rate" means the variable rate of interest, per annum, most recently announced by Bank, as its "prime rate," whether or not such announced rate is the lowest rate available from Bank.

"Responsible Officer" means each of the Chief Executive Officer, the Chief Operating Officer, the Chief financial Officer, Vice President of Finance and the Controller of Borrower, as well as any other officer of employee identified as an Authorized Officer in the corporate resolution delivered by Borrower to Bank in connection with this Agreement.

"Schedule" means the schedule of exceptions attached hereto and approved by Bank, if any.

"SOS Reports" means the official reports from the Secretaries of State of each Collateral State, the state where Borrower's chief executive office is located, the state of Borrower's formation and other applicable federal, state or local government offices identifying all current security interests filed in the Collateral and Liens of record as of the date of such report.

"Subordinated Debt" means any debt incurred by Borrower that is subordinated in writing to the debt owing by Borrower to Bank on terms reasonably acceptable to Bank (and identified as being such by Borrower and Bank).

"Subsidiary" means any corporation, partnership or limited liability company or joint venture in which (i) any

general partnership interest or (ii) more than 50% of the stock, limited liability company interest or joint venture of which by the terms thereof ordinary voting power to elect the Board of Directors, managers or trustees of the entity, at the time as of which any determination is being made, is owned by Borrower, either directly or through an Affiliate.

"Term Loan Maturity Date" means August 7, 2016.

"Term Loan B Maturity Date" means December 14, 2014.

"Term Sheet Milestone" means the receipt by Borrower, after the closing Date but on or before November 1, 2012, of a signed and accepted term sheet from the investors acceptable to Bank for the sale or issuance of Borrower's equity securities, with net Cash proceeds to be received by Borrower of at least $5,000,000, and with such term sheet providing for the funding of such $5,000,000 on or before December 15, 2012.

"Trademarks" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

"Tranche A Term Loan Availability End Date" means August 7, 2013.

"Tranche B Equity Trigger Event" means the receipt by Borrower, after the closing Date but on or before December 15, 2012, of net Cash proceeds of at least $5,000,000 from the sale or issuance of Borrower's equity securities to investors acceptable to Bank.

"Tranche B Term Loan Interest-Only End Date" means the day that is twelve months after the Tranche B Equity Trigger Event.

DEBTOR: HEAT BIOLOGICS, INC.

SECURED PARTY: SQUARE 1 BANK

EXHIBIT B

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), financial assets, general intangibles (including patents, trademarks, copyrights, goodwill, payment intangibles, domain names, and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records;

(b) any and all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the North Carolina Uniform commercial Code, as amended or supplemented from time to time, including revised Division 9 of the Uniform Commercial Code-Secured Transactions.

Notwithstanding the foregoing, the Collateral shall not include any of the intellectual property, in any medium of any kind or nature whatsoever, now or hereafter owned or acquired or received by Borrower, or in which Borrower now holds or hereafter acquires of receives any right or interest (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the "Rights to Payment").

Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of August 7, 2012, include the Intellectual Property to the extent and only to the extent necessary to permit perfection of Bank's security interest in the Rights to Payment, and further provided, however, that Bank's enforcement rights with respect to any security interest in the Intellectual Property shall be absolutely limited to the Rights to Payment only, and bank shall have no recourse whatsoever with respect to the underlying Intellectual Property.

DEBTOR HEAT BIOLOGICS I, INC.

SECURED PARTY: SQUARE 1 BANK

EXHIBIT B

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), financial assets, general intangibles (including patents, trademarks, copyrights, goodwill, payment intangibles, domain names and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records.

(b) any and all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefore or for any right to payment. All terms above have the meanings given to them in the North Carolina Uniform Commercial Code, as amended or supplemented from time to time, including revised Division 9 of the Uniform Commercial Code-Secured Transactions.

Notwithstanding the foregoing, the Collateral shall not include any of the intellectual property, in any medium of any kind or nature whatsoever, now or hereafter owned or acquired or received by Borrower, or in which Borrower now holds or hereafter acquires of receives any right or interest (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the "Rights to Payment").

Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of August 7, 2012, include the Intellectual Property to the extent and only to the extent necessary to permit perfection of Bank's security interest in the Rights to Payment, and further provided, however, that Bank's enforcement rights with respect to any security interest in the Intellectual Property shall be absolutely limited to the Rights to Payment only, and Bank shall have no recourse whatsoever with respect to the underlying Intellectual Property.

EXHIBIT C

LOAN ADVANCEMENT/PAYDOWN REQUEST FORM

[*Please refer to New Borrower Kit]*

EXHIBIT D

COMPLIANCE CERTIFICATE

[Please refer to New Borrower Kit]

EXHIBIT E

FORM OF WARRANT

[Required by Section 6.7(c)]

SCHEDULE OF EXCEPTIONS

Permitted Indebtedness (Exhibit A) – None

Permitted Investments (Exhibit A) – None.

Permitted Liens (Exhibit A) – None.

Prior Names (Section 5.5) – None.

Litigation (Section 5.6) – None.

Inbound Licenses B(Section 5.12) – None.

CORPORATE RESOLUTION

The undersigned duly elected and qualified (Assistant) Secretary of Heat Biologics, Inc. (the "Company") does hereby certify that the following is a true and correct copy of certain resolutions adopted at a meeting of the Company's Board of Directors held on July 25, 2012 in accordance with applicable law and the company's bylaws, and that such resolutions are not unmodified and in full force and effect:

BE IT RESOLVED, that,

1) Any one (1) of the following, duly elected officers of the Company (each, an "Authorized Officer") whose genuine original signature appears next to his or her name is authorized to act for, on behalf of, and in the name of the company in connection with resolutions below:

Title	Name	**Authorized Signature**
CEO	Jeffrey Wolf	/s/ Jeffrey Wolf

2) Any Authorized Officer may:

(a) Borrow money from time to time from Square 1 Bank ("Bank"), and may negotiate and procure loans, letters of credit, foreign exchange contracts and other financial accommodations from Bank, including without limitation, that certain Loan and Security Agreement dated as of August 7, 2012, and also to execute and deliver to Bank one or more renewals, extensions, or modifications thereof.

(b) Give security for any liabilities of the Company to Bank by grant, security interest, assignment, lien, deed of trust or mortgage upon any real of personal property, tangible or intangible of the company;

(c) Purchase, sell, exchange, assign, endorse for transfer and/or deliver certificates and/or instruments representing stocks, bonds, evidences of Indebtedness or other securities owned by the company, whether or not registered in the name of the Company;

(d) Discount with the Bank, commercial or other business paper belonging to the Company made or drawn by or upon third parties, without limit as to amount;

(e) Authorize and direct the Bank to pay the proceeds of any such loans or discounts as directed by the persons so authorized to sign;

(f) Issue a warrant or warrants to purchase the Company's capital stock;

(g) Execute and deliver in form and content as may be required by the Bank any and all notes, evidences of indebtedness, applications for letters of credit, guaranties, subordination agreements, loan and security agreements, financing statements, assignments, liens, deeds of trust, mortgages, trust receipts and other agreements, instruments or documents to carry

out the purposes of these resolutions, any or all of which may relate to all or to substantially all of the Company's property and assets;

3) The Authorized Officer may designate additional or alternate individuals as being authorized to request loan advances, to do and perform such other acts and things, to pay any and all fees and costs, and to execute and deliver such other documents and agreements as he or she may in his or her discretion deem reasonably necessary or proper in order to carry into effect the provisions of these resolutions.

4) Any and all acts authorized pursuant to these resolutions and performed prior to the passage of these resolutions and hereby ratified and approved, and the authority conferred herein may be exercised singly by and such officer, and these resolutions shall continue in full force and effect until written notice of modification or revocation is received and accepted by Bank (such notice to have no effect on any action previously taken by the Bank in reliance on these resolutions). Bank may rely upon any form of notice, which it in good faith believes to be genuine or what it purports to be.

5) The resolutions are in full force and effect as of the date of this Certificate and are intended to replace, as of this date, any resolutions previously given by the Company to Bank in connection with the matters described herein; these resolutions any borrowings or financial accommodations under these resolutions have been properly noted in the corporate books and records, and have not been rescinded, revoked or modified; neither the foregoing resolutions nor any actions to be taken pursuant to them are or will be in contravention of any provision of the articles of incorporation or bylaws of the Company or of any agreement, indenture or other instrument to which the Company is a party, or by which it is bound; and to the extent the articles of incorporation or bylaws of the Company or any agreement, indenture or other instrument to which the company is a party or by which it is bound require the vote or consent of shareholders of the Company to authorize any act, matter or thing described in the foregoing resolutions, such vote or consent has been obtained.

In Witness Whereof, I have affixed my name as [Assistant] Secretary and have caused the corporate seal (where available) of said Company to be affixed on Aug 8, 2012.

/s/Jeffrey Wolf
[Assistant] Secretary*

*If the certifying officer is designated as the only signer in these resolutions then another corporate officer must also sign.

CORPORATE RESOLUTION

The undersigned duly elected and qualified [Assistant] Secretary of Heat Biologics, Inc. (the "Company") does hereby certify that the following is a true and correct copy of certain resolutions adopted at a meeting of the Company's Board of Directors held on July 25, 2012 in accordance with applicable law and the company's bylaws, and that such resolutions are now unmodified and in full force and effect:

BE IT RESOLVED, that:

1) Any one (1) of the following, duly elected officers of the Company (each, and "Authorized Officer") whose genuine original signature appears next to this or her name is authorized to set for, on behalf of, and in the name of the Company in connection with the resolutions below:

Title	Name	**Authorized Signature**
CEO	Jeffrey Wolf	/s/ Jeffrey Wolf

2) Any Authorized Officer may:

(a) Borrow money from time to time from Square 1 Bank ("Bank"), and may negotiate and procure loans, letters of credit, foreign exchange contracts and other financial accommodations from Bank, including without limitation, that certain Loan and Security Agreement dated as of August 7, 2012, and also to execute and deliver to Bank one or more renewals, extensions, or modifications thereof;

(b) Give security for any liabilities of the Company to Bank by grant, security interest, assignment, lien, deed of trust or mortgage upon any real or personal property, tangible or intangible of the Company;

(c) Purchase, sell, exchange, assign, endorse for transfer and/or deliver certificates and/or instruments representing stocks, bonds, evidences of Indebtedness or other securities owned by the company, whether or not registered in the name of the Company;

(d) Discount with the Bank, commercial or other business paper belonging to the Company made or drawn by or upon third parties, without limit as to amount;

(e) Authorize and direct the Bank to pay the proceeds of any such loans or discounts as directed by the persons so authorized to sign;

(f) Issue a warrant or warrants to purchase the Company's capital stock;

(g) Execute and deliver in form and content as may be required by the Bank any and all notes, evidences of indebtedness, applications for letters of credit, guaranties, subordination agreements, loan and security agreements, financing statements, assignments, liens, deeds of trust, mortgages, trust receipts and other agreements, instruments or documents to carry

3) The Authorized Officers may designate additional or alternate individuals as being authorized to request loan advances, to do and perform such other acts and things, to pay any and all fees and costs, and to execute and deliver such other documents and agreements as he or she may at his or her discretion deem reasonably necessary or proper in order to carry into effect the provisions of these resolution.

4) Any and all acts authorized pursuant to these resolutions and performed prior to the passage of these resolutions are hereby ratified and approved, and the authority conferred herein may be exercised singly by any such officer, and these resolutions shall continue in full force and effect until written notice of modification or revocation is received and accepted by Bank (such notice to have no effect on any action previously taken by the Bank in reliance on these resolutions). Bank may rely upon any form of notice, which it in good faith believes to be genuine or what it is purports to be.

5) The resolutions are in full force and effect as of the date of this Certificate and are intended to replace, as of this date, any resolutions previously given by the Company to Bank in connection with the matters described herein; these resolutions and any borrowing or financial accommodations under these resolutions have been properly noted in the corporate books and records, and have not be rescinded, revokes or modified, neither the foregoing resolutions nor any actions to be taken pursuant to them are or will be in contravention of any provision of the articles of incorporation or bylaws of the Company or of any agreement, indenture or other instrument to which the company is a party or by which it is bound; and to the extent the articles of incorporation or bylaws of the Company or any agreement, indenture or other instrument to which the Company is a party or by which it is bound require the vote or consent of shareholders of the Company to authorize any act, matter or thing described in the foregoing resolutions, such vote or consent has been obtained.

In Witness Whereof, I have affixed my name as [Assistant] Secretary and have caused the corporate seal (where available) of said Company to be affixed on Aug 8, 2012, 2012.

/s/Jeffrey Wolf
[Assistant] Secretary*

*If the certifying officer is designated as the only signer in these resolutions then another corporate officer must also sign.

USA PATRIOT ACT
NOTICE
OF
CUSTOMER IDENTIFICATION

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT

To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account.

WHAT THIS MEANS FOR YOU: when you open an account, we will ask your name, address, date of birth, and other information that will allow us to identify you. We may also ask to see your driver's license or other identifying documents.

SQUARE 1 BANK

AUTOMATIC DEBIT AUTHORIZATION

Member FDIC

To: **Square 1 Bank**

Re: Loan #_____

You are hereby authorized and instructed to charge account No. _____ in the name of Heat Biologics, Inc.
for facilities fees, principal interest and other payments due on above referenced loan as set forth below and credit the loan referenced above.

X Debit the Facility Fee as it become due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each interest payment as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each principal payment as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each payment for Bank Expenses as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

This Authorization is to remain in full force and effect until revoked in writing.

Borrower Signature	Date
/s/ Jeffrey Wolf	Aug 8, 2012

SQUARE 1 BANK

AUTOMATIC DEBIT AUTHORIZATION

Member FDIC

To: **Square 1 Bank**

Re: Loan #_____

You are hereby authorized and instructed to charge account No. _____ in the name of Heat Biologics I, Inc.
for facility fees, principal, interest and other payments due on above referenced loan as set forth below and credit the loan referenced above.

X Debit the Facility Fee as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each interest payment as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each principal payment as it becomes due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

X Debit each payment for Bank Expenses as it become due according to the terms of the Loan and Security Agreement and any renewals or amendments thereof.

This Authorization is to remain in full force and effect until revoked in writing.

Borrower Signature	Date
/s/ Jeffrey Wolf	Aug 8, 2012

General Authorization
I hereby authorize Square 1 Bank to use my company name, logo, and information relating to our banking relationship in its marketing and advertising campaigns which is intended for Square 1 Bank's customers, prospects and shareholder.

Square 1 Bank will forward any advertising or article including client for prior review and approval.

/s/ Jeffrey Wolf
Signature

Jeffrey Wolf, CEO
Printed Name

Heat Biologics, Inc.
Company

100 Europa Drive, Suite 420
Mailing Address

Chapel Hill, NC 27517
City, State, Zip code

919-240-7133
Phone Number

919-240-7540
Fax Number

jwolf@heatbio.com
E-Mail

Aug 8 2012
Date

General Authorization
I hereby authorize Square 1 Bank to use my company name, logo, and information relating to our banking relationship in its marketing and advertising campaigns which is intended for Square 1 Bank's customers, prospects and shareholder.

Square 1 Bank will forward any advertising or article including client for prior review and approval.

/s/ Jeffrey Wolf
Signature

Jeffrey Wolf, CEO
Printed Name

Heat Biologics I, Inc.
Company

100 Europa Drive, Suite 420
Mailing Address

Chapel Hill, NC 27517
City, State, Zip code

919-240-7133
Phone Number

919-240-7540
Fax Number

jwolf@heatbio.com
E-Mail

Aug 8 2012
Date

THIS CONVERTIBLE PROMISSORY NOTE (THIS "NOTE") AND THE SECURITIES ISSUABLE UPON CONVERSION HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT, APPLICABLE STATE SECURITIES LAWS, OR APPLICABLE LAWS OF ANY FOREIGN JURISDICTION. THIS NOTE AND SUCH SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE OFFERED, SOLD, PLEDGED, HYPOTHECATED, RENOUNCED OR OTHERWISE TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT AND ANY APPLICABLE STATE SECURITIES LAWS AND IN THE ABSENCE OF COMPLIANCE WITH APPLICABLE LAWS OF ANY FOREIGN JURISDICTION, OR THE AVAILABILITY OF AN EXEMPTION FROM THE REGISTRATION PROVISIONS OF THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS.

HEAT BIOLOGICS, INC.

CONVERTIBLE PROMISSORY NOTE

$950,000 **_____, _____2011**
Research Triangle Park, North Carolina

Heat Biologics, Inc., a Delaware corporation (the "**Company**") promises to pay to XXXX(the "**Lender**"), or its registered assigns, in lawful money of the United States of America the principal sum of $950,000, or such lesser amount actually advanced to the Company under this Note, together with simple interest on the principal balance of each advance from the date of such advance at a rate equal to 12.0% per annum, computed on the basis of the actual number of days elapsed and a year of 365 days. Unless earlier converted into shares of Equity Securities (as defined below) pursuant to the terms of this Note, the principal and accrued interest shall be due and payable by Borrower on demand by Lender at any time after the earlier of: (i) the eighth anniversary of the Effective Date of that certain Manufacturing Services Agreement between the Lender and the Company dated October ___, 2011 (as amended, the "**MSA**"), or if the MSA is terminated prior to such date, the termination date of the MSA unless termination is a result of breach or nonperformance by Lender (or its affiliates or successors), in which case the due date shall be the second anniversary of termination and (ii) the closing of the Qualified Offering (as defined below) (such earlier date, the "**Maturity Date**").

From time to time, Lender shall issue to the Company invoices in respect of services rendered pursuant to the MSA. Approval by the Company of any such invoice shall be deemed to be an advance hereunder by the Lender of the approved amount of such invoice, with such advance effective as of the date that payment under such invoice is due according to the terms of the MSA or that the Company approves the invoice, whichever is earlier. Any such advances of principal shall, upon request by either Company or the Lender, be evidenced by an update to the Schedule of Advances attached to this Note as Schedule A.

1. Interest. Accrued interest on this Note shall be payable at maturity.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

2. Prepayment. The Company may prepay principal, together with accrued interest, in whole or in part only with the written consent of Lender. Prepayment shall be credited first to accrued interest and thereafter to principal.

3. Security. This Note is a general unsecured obligation of the Company.

4. Full or Partial Acceleration.

(a) All outstanding principal and unpaid accrued interest due on such Note shall be due and payable upon consummation of any transaction defined as a "Deemed Liquidation Event" in the Company's Second Amended and Restated Certificate of Incorporation on file with the Secretary of State of the State of Delaware.

(b) If, at a time this Note is outstanding, the Company completes the sale of its Equity Securities for gross proceeds of at least $4,200,000 in a transaction or series of related transactions that does not constitute a Qualified Offering (as defined below), the Company shall notify the Lender of such sale. Lender shall have the right to demand that the Company repay 50% of the outstanding principal balance of this Note in cash within thirty days of following the date of such sale. For clarification, the conversion into preferred stock of those convertible promissory notes issued by the Company commencing on or about May 18, 2010 in a financing of the Company with aggregate proceeds through September 1, 2011 of approximately $2,623,709 (such notes, the "**2010 Notes**") shall not constitute a sale of Equity Securities for purposes of this Section 4.

5. Conversion of the Note. The Note shall be convertible according to the following terms:

(a) The following terms shall have the meanings assigned below:

(i) "**Equity Securities**" shall mean the Company's Common Stock or Preferred Stock or any securities conferring the right to purchase the Company's Common Stock or Preferred Stock or securities convertible into, or exchangeable for (with or without additional consideration), the Company's Common Stock or Preferred Stock, except any security granted, issued and/or sold by the Company to any director, officer, employee or consultant of the Company in such capacity for the primary purpose of soliciting or retaining their services.

(ii) "**Qualified Offering**" shall mean the next sale (or series of related sales) by the Company of its Equity Securities following the date of this Note from which the Company receives gross proceeds of not less than $7,500,000 (including the aggregate amount of debt securities converted into Equity Securities upon conversion or cancellation of promissory notes, including, without limitation, this Note).

(b) Qualified Offering Conversion. The principal and unpaid accrued interest of this Note will be automatically converted into the type of Equity Securities issued in the Qualified Offering upon the closing of the Qualified Offering. The number of shares of such Equity Securities to be issued upon such conversion shall be equal to the quotient obtained by dividing the outstanding principal and unpaid accrued interest due on this Note on the date of conversion, by the weighted average price paid per share for Equity Securities by the investors in the Qualified Offering. At least twenty (20) business days prior to the closing of the Qualified Offering, the Company shall notify the Lender in writing of the terms under which the Equity Securities of the Company will be sold in such financing. The conversion of this Note into Equity Securities shall be on such terms and shall occur on the closing date of such Qualified Offering. Without limiting the generality of the foregoing, the Lender shall be granted registration rights with respect to the Equity Securities issued upon conversion of this Note (and shares of Common Stock into which such Equity Securities may be converted or exercised) that are equivalent to those registration rights, if any, granted to investors in the Qualified Offering that invest a substantially similar amount and the Lender shall be granted Board observation rights with respect to the Equity Securities issued upon conversion of this Note (and shares of Common Stock into which such Equity Securities may be converted or exercised) that are equivalent to those observation rights, if any, granted to investors in the Qualified Offering that invest a substantially similar amount; provided, that Lender shall maintain its Board observation rights granted under Section 10(a) of this Note for a period of one (1) year following conversion hereunder. Notwithstanding the foregoing, the Company shall not be required to permit the Observer to attend any portion of a meeting, or to provide to the Observer information with respect to that portion of a meeting, to the extent that the Board determines in good faith that the Lender and the Company have conflicting interests relating to the matter to be discussed and such limitation shall be included in the applicable stockholder agreements. Such Board observation rights shall replace the rights set forth in Section 10(a) below.

(c) Mechanics of Conversion. The Company shall not be required to issue or deliver the Equity Securities until the Lender has surrendered the Note to the Company. Such conversion may be made contingent upon the closing of the Qualified Offering.

(d) Fractional Shares; Interest; Effect of Conversion. No fractional shares shall be issued upon conversion of this Note. In lieu of the Company issuing any fractional shares to the Lender upon the conversion of this Note, the Company shall pay to the Lender an amount equal to the product obtained by multiplying the conversion price by the fraction of a share not issued pursuant to the previous sentence. Upon conversion of this Note in full and the payment of any amounts specified in this Section 5(d), the Company shall be forever released from all its obligations and liabilities under this Note.

6. Representations and Warranties of the Company. The Company hereby represents and warrants to the Lender that, effective as of the date of this Note:

(a) Due Incorporation, Good Standing, Corporate Power and Qualification. Each of the Company, Heat Biologics I, Inc. and Heat Biologics II, Inc. (each of Heat Biologics I and Heat Biologics II, a "**Subsidiary**" and together, the "**Subsidiaries**") is a corporation duly incorporated, validly existing, and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as presently conducted and as proposed to be conducted. Each of the Company and the Subsidiaries is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a material adverse effect on the business, assets (including intangible assets), liabilities, financial condition, property or results of operations of the Company or the Subsidiaries.

(b) Authorization. Except for the authorization and issuance of the shares issuable in connection with the Qualified Offering, all corporate action has been taken on the part of the Company, the Subsidiaries, and each of their officers, directors and stockholders necessary for the authorization, execution and delivery of this Note. Except as may be limited by applicable bankruptcy, insolvency, reorganization, or similar laws relating to or affecting the enforcement of creditors' rights, the Company has taken all corporate action required to make all of the obligations of the Company reflected in the provisions of this Note, the valid and enforceable obligations they purport to be.

(c) Valid Issuance of Capital Stock. The offer, issuance and sale of this Note and the Equity Securities to be issued, sold and delivered upon conversion of this Note will be duly and validly issued, fully paid and nonassessable and, assuming the accuracy of the representations and warranties of the Lenders in the Note, will be issued in compliance with all applicable federal and state securities laws.

(d) Capitalization. The authorized capital stock of the Company, immediately prior to the initial issuance of this Note, will consist of 50,000,000 shares of Common Stock, $0.0001 par value per share, and 2,112,500 shares of Preferred Stock, $0.0001 par value per share, of which 112,500 shares have been designated Series 1 Preferred Stock and of which 2,000,000 have been designated as Series A Preferred Stock. The Company currently has the following securities outstanding: 4,149,781 shares of its Common Stock; 112,500 shares of its Series 1 Preferred Stock and 2,273,800 shares of its Series A Preferred Stock. In addition, the Company has granted or reserved 1,350,219 options exercisable into shares of its Common Stock and warrants exercisable into 75,000 shares of Common Stock. Other than the foregoing, the Company has no other debt or equity securities, or options or other derivatives exercisable into debt or equity securities, outstanding, nor any obligation to issue any such securities (or options, etc.) or any other right, agreement or commitment of any nature relating to the voting, issuance, sale, delivery or transfer (including any right of conversion or exchange under any outstanding security or other instruments) by the Company of any such securities or other capital or voting interests of the Company. The authorized capital stock of Heat Biologics I, Inc. ("**Heat I**") consists of 100,000,000 shares of Common Stock, $0.0001 par value per share, 4,000,000 of which are issued and outstanding, with 3,700,000 owned by the Company and 300,000 owned by the University of Miami. The authorized capital stock of Heat Biologics II, Inc. ("**Heat II**") consists 100,000,000 shares of Common Stock, $0.0001 par value per share, 4,000,000 of which are issued and outstanding, with 3,700,000 owned by the Company and 300,000 owned by the University of Miami. Other than the foregoing, Heat I and Heat II have no other debt or equity securities, or options or other derivatives exercisable into debt or equity securities, outstanding, nor any obligation to issue any such securities (or options, etc.) or any other right, agreement or commitment of any nature relating to the voting, issuance, sale, delivery or transfer (including any right of conversion or exchange under any outstanding security or other instruments) by the Company, Heat I or Heat II of any such securities or other capital or voting interests of Heat I or Heat II.

(e) Actions and Proceedings; Litigation. There is no action, proceeding, claim, litigation or investigation pending or, to the best of the Company's knowledge, currently threatened against the Company or the Subsidiaries. The foregoing includes, without limiting its generality, actions pending or threatened involving the Company's or the Subsidiaries' Intellectual Property (defined below) as well as the prior employment of any of the Company's or the Subsidiaries' employees or their use in connection with the Company's or the Subsidiaries' business of any information or techniques allegedly proprietary to any of their former employers, nor, to the Company's knowledge, is there any basis for any such Intellectual Property or employee actions, claims, litigation, etc. There is no action, proceeding, claim, litigation or investigation by the Company or the Subsidiaries currently pending or that the Company or the Subsidiaries intend to initiate. None of the Company or the Subsidiaries is a party to or subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality.

(f) Compliance with other Instruments. A true, correct, current and complete copy of the Company's Second Amended and Restated Certificate of Incorporation (the "**Charter**") and Bylaws is attached hereto as Exhibits A and B, respectively. None of the Company or the Subsidiaries is in violation or default of any term of its certificate of incorporation or bylaws, or of any provision of any mortgage, indenture or contract to which it is a party and by which it is bound or of any judgment, decree, order or writ The execution, delivery and performance of the MSA and the Note and the consummation of the transactions contemplated hereby and thereby will not result in any such violation or be in conflict with, or constitute, with or without the passage of time and giving of notice, either a default under any such provision, instrument, judgment, decree, order or writ or an event that results in the creation of any lien, charge or encumbrance upon any assets of the Company or a Subsidiary or the suspension, revocation, impairment, forfeiture, or nonrenewal of any permit, license, authorization or approval applicable to the Company or a Subsidiary, its business or operations or any of its assets or properties. Without limiting the foregoing, the Company and the Subsidiaries have obtained all waivers reasonably necessary with respect to any preemptive rights, rights of first refusal or similar rights, including any notice or offering periods provided for as part of any such rights, anti-dilution waivers and the like, in order for the Company to consummate the transactions contemplated hereunder without any third party obtaining any rights to cause the Company or any Subsidiary to offer or issue any securities of the Company or a Subsidiary or alter the price at which any convertible securities of the Company or a Subsidiary may be converted in the future as a result of consummation of the transactions contemplated hereunder.

(g) Indebtedness. The Company currently has approximately $20,000 due to scientific consultants and external service providers (the "Debt"). Other than the Debt, the Company does not have indebtedness exceeding $25,000 (plus legal expenses) in the aggregate. Neither of the Subsidiaries has any outstanding indebtedness.

(h) Intellectual Property. To the knowledge of the Company, all (i) patents and patent applications; (ii) trademarks and service marks, together with all goodwill associated with each of the foregoing; (iii) copyrights; and (iv) registrations, applications and renewals for any of the foregoing (collectively, "Intelle**ctual Property**") owned by or licensed to the Company or a Subsidiary are valid and have not been adjudicated to be unenforceable. To the knowledge of the Company, no Intellectual Property owned by or licensed to the Company or a Subsidiary has been or is now involved in any cancellation or litigation proceedings and no such action has been threatened. No patent owned by the Company or a Subsidiary, and, to the knowledge of the Company, no patent licensed to the Company or a Subsidiary, has been or is now involved in any interference, reissue, re-examination, cancellation or opposition proceeding. To the Company's knowledge, the conduct of the Company's and the Subsidiaries' business as currently conducted or as currently proposed to be conducted does not infringe or otherwise impair or conflict with (collectively, "**Infringe**") any Intellectual Property rights of any third party or any confidentiality obligation owed to a third party, and, to the knowledge of the Company, the Intellectual Property of the Company and the Subsidiaries which is necessary for the conduct of Company's business as currently conducted or as currently proposed to be conducted is not being Infringed upon by any third party. To the knowledge of the Company, the Company or a Subsidiary owns or has valid licenses to all Intellectual Property necessary for the conduct of the Company's and the Subsidiaries' business as currently contemplated.

(i) Financial Statements. The Company has made available to the Lender copies of its most recent unaudited financial statements, and such financial statements present fairly, in all material respects, the consolidated financial condition of the Company as of the dates shown, and such statements have been prepared in conformity with GAAP (applied on a consistent basis).

(j) No Anti-Dilution Rights. Other than the rights of the holders of Series A Preferred Stock and Series 1 Preferred Stock set forth in the Charter, the Company has not granted anti-dilution protection other than a preemptive right to purchase a ratable amount of any new securities.

7. Representations and Warranties of the Lender**.** In connection with the transactions provided for herein, the Lender hereby represents and warrants to the Company that:

(a) Authorization. This Note constitutes the Lender's valid and legally binding obligation, enforceable in accordance with its terms, except as may be limited by (i) applicable bankruptcy, insolvency, reorganization or similar laws relating to or affecting the enforcement of creditors' rights and (ii) laws relating to availability of specific performance, injunctive relief or other equitable remedies.

(b) Purchase Entirely for Own Account. The Lender acknowledges that this Note is issued to the Lender in reliance upon the Lender's representation to the Company that the Note will be acquired for investment for the Lender's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that such Lender has no present intention of selling, granting any participation in, or otherwise distributing the same. By executing this Note, the Lender further represents that the Lender does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to this Note.

(c) Access to Information. The Lender acknowledges that the Company has given the Holder access to the corporate records and accounts of the Company and to information in its possession relating to the Company requested by the Lender, has made its officers and representatives available for interview by the Lender, and has furnished the Lender with documents and other information requested by the Lender for the Lender to make an informed decision with respect to the purchase of this Note.

(d) Investment Experience. The Lender is an investor in securities of companies in the development stage and acknowledges that it is able to fend for itself, can bear the economic risk of its investment, and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in this Note. If other than an individual, the Lender also represents it has not been organized solely for the purpose of acquiring this Note.

(e) Accredited Investor. The Lender is an "accredited investor" within the meaning of Rule 501 of Regulation D, as presently in effect, as promulgated by the Securities and Exchange Commission (the "**SEC**") under the Securities Act.

(f) Restricted Securities. The Lender understands that this Note is characterized as a "restricted security" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities may be resold without registration under the Act, only in certain limited circumstances. In this connection, the Lender represents that it is familiar with Rule 144 as promulgated by the SEC under the Securities Act, as presently in effect and understands the resale limitations imposed thereby and by the Securities Act.

(g) Further Limitations on Disposition. Without in any way limiting the representations and warranties set forth above, the Lender further acknowledges and agrees that this Note and the Equity Securities issuable upon conversion hereof are subject to the provisions of the Company's Bylaws, including without limitation, all restrictions on transfer and rights of first refusal applicable to shares of the Company's Common Stock described in the Bylaws. The Lender may inspect the Bylaws at the Company's principal office.

8. Defaults and Remedies.

(a) Events of Default. The following events shall be considered Events of Default with respect to this Note:

(i) The Company shall default in the payment of any part of the principal or unpaid accrued interest on the Note for more than five (5) days after the same shall become due and payable, whether at maturity or at a date fixed for prepayment or by acceleration or otherwise;

(ii) The Company shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts as they become due, or shall file a voluntary petition for bankruptcy, or shall file any petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, dissolution or similar relief under any present or future statute, law or regulation, or shall file any answer admitting the material allegations of a petition filed against the Company in any such proceeding, or shall seek or consent to or acquiesce in the appointment of any trustee, receiver or liquidator of the Company, or of all of any substantial part of the properties of the Company, or the Company or its respective directors or majority stockholders shall take any action looking to the dissolution or liquidation of the Company;

(iii) Within 30 days after the commencement of any proceeding against the Company seeking any bankruptcy reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, such proceeding shall not have been dismissed or, within 30 days after the appointment without the consent or acquiescence of the Company of any trustee, receiver or liquidator of the Company or of all or any substantial part of the properties of the Company, such appointment shall not have been vacated; or

(iv) The Company shall purchase or redeem or pay or declare any dividend or make any distribution on, any shares of its capital stock other than (A) dividends or other distributions payable solely in the form of additional shares of Common Stock or (B) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Company in connection with the cessation of such employment or service on such terms as may be approved by the Company's Board of Directors

(v) Breach of Representations, Warranties or Covenants. The Company shall have materially breached any of its representations, warranties or covenants set forth herein.

(b) Remedies. The Company shall provide the Lender with not less than ten (10) business days' notice of its knowledge of, or its intention to allow or effect any of the circumstances listed above which would cause, or would reasonably be expected to cause, an Event of Default. Upon the occurrence of an Event of Default under Section 8(a) hereof, at the option and upon the declaration of the Lender, the entire unpaid principal and accrued and unpaid interest on this Note shall, without presentment, demand, protest or notice of any kind, all of which are hereby expressly waived, be forthwith due and payable, and the Lender may, immediately and without expiration of any period of grace, enforce payment of all amounts due and owing under this Note and exercise any and all other remedies granted to it at law, in equity or otherwise.

9. [omitted].

10. **Additional Rights and Obligations.**

(a) Board Observer. Upon the date of the issuance of the first advance hereunder and for so long as any amounts remain outstanding under this Note and for a period of one (1) year following conversion of this Note, the Lender shall be entitled to designate one (1) representative to attend all meetings of the Board (whether in person, telephonic or otherwise) in a non-voting observer capacity (the "**Observer**"). The Company shall provide to the Observer, concurrently with the members of the Board and in the same manner, notice of any and all Board meetings and, subject to the provisions hereof, a copy of all materials provided to such members. Notwithstanding the foregoing, the Company shall not be required to permit the Observer to attend any portion of a meeting, or to provide to the Observer information with respect to that portion of a meeting, to the extent that the Board determines in good faith that the Lender and the Company have conflicting interests relating to the matter to be discussed.

(b) Information Rights. The Company acknowledges that the Lender and its affiliates will likely have, from time to time, information that may be of interest to the Company ("**Information**") regarding a wide variety of matters including, by way of example only, the Lender's technologies, plans, services, and strategies and developments relating thereto, current and future investments that the Lender may consider or make, and information related to the Lender's customers, vendors, suppliers and competitors. The Company recognizes that a portion of such Information may be of interest to the Company. Such Information may or may not be known to the Observer and other Lender personnel. The Company, as a material part of the consideration relating to the Note, agrees that the Lender, its affiliates, and the Observer shall have no duty to disclose any Information to the Company or permit the Company to participate in any projects or investments based on any Information, or to otherwise take advantage of any opportunity that may be of interest to the Company if it were aware of such Information and hereby waives, to the extent permitted by law, any claim based on the corporate opportunity doctrine or otherwise that could limit the Lender's or its affiliates' ability to pursue opportunities based on such Information or that would require the Lender, its affiliates or the Observer to disclose any such Information to the Company or offer any opportunity relating thereto to the Company.

(c) Stockholder Agreements. The Lender understands and agrees that the conversion of this Note into Equity Securities may require the Lender's execution of certain agreements in the form agreed to by investors in the Qualified Offering relating to the purchase and sale of such securities as well as restrictions on transfer, registration, co-sale, rights of first refusal, rights of first offer and voting rights, if any, relating to such securities. Upon conversion of the Notes, the Lender shall be entitled to such registration rights and other stockholder rights (including any information rights, preemptive rights, or similar rights of first refusal and co-sale rights) as have been granted to the other purchasers of substantially similar amounts of the same class of the Company's equity securities, provided that the Lender executes and becomes a party to the agreements evidencing such rights.

11. **Miscellaneous.**

(a) Amendments and Waivers. Any provision of this Note may be amended or may be waived (either generally or in a particular instance, and either retroactively or prospectively) only by the agreement of the Company and the Lender. Any waiver or amendment effected in accordance with this Section shall be binding upon each party to any Note and each future holder of a Note.

(b) Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Note shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Note, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations or liabilities under or by reason of this Note, except as expressly provided in this Note. If Lender assigns the MSA in accordance with its terms, Lender may, without the Company's consent, transfer this Note to the assignee of the MSA. Otherwise, the Lender may not assign, convey or transfer this Note or its duties and obligations hereunder without the prior, written consent of the Company, and any assignment, conveyance or transfer by the Lender in violation of this restriction shall be for all purposes null and void. Any purported transfer of securities into which this Note may convert shall be governed by the terms of the applicable stockholder agreements. Subject to the foregoing, transfers of this Note shall be registered upon registration books maintained for such purpose by or on behalf of the Company. Prior to presentation of this Note for registration of transfer, the Company shall treat the registered holder hereof as the owner and holder of this Note for the purpose of receiving all payments of principal and interest hereon and for all other purposes whatsoever, whether or not this Note shall be overdue and the Company shall not be affected by notice to the contrary. The Company may not assign, convey or transfer this Note or its duties and obligations hereunder without the prior, written consent of the Lender, and any assignment, conveyance or transfer by the Company in violation of this restriction shall be for all purposes null and void. The rights and obligations of the Company and the Lender under this Note shall be binding upon and benefit their respective successors, permitted assigns, heirs, administrators and transferees.

(c) Entire Agreement; Governing Law. This Note and the other documents delivered pursuant hereto constitutes the entire agreement between the Company and the Lender with respect to the subject matter hereof and supersedes in their entirety all prior undertakings and agreements of the Company and the Lender with respect to the subject matter hereof. This Note shall be governed by and construed in accordance with the General Corporation Law of the State of Delaware, as to matters within the scope thereof, and the internal laws of the State of North Carolina (without reference to conflict of law provisions), as to all other matters.

(d) Notices. Unless otherwise provided herein, all notices required or permitted hereunder shall be in writing and deemed effectively given upon personal delivery or five days after deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to (i) in the case of the Company, at 15 TW Alexander Drive, Suite 119, Research Triangle Park, NC 27709 with a required copy to Hutchison Law Group, Attn: Fred D. Hutchison, 5410 Trinity Road, Suite 400, Raleigh, NC 27607 or (ii) in the case of the Lender, at the address set forth on the signature page hereto.

(e) Agreement in Connection with Public Offering. The Lender agrees, in connection with the initial underwritten public offering of the Company's securities pursuant to a registration statement under the Securities Act: (i) not to sell, make short sale of, loan, grant any options for the purchase of, or otherwise dispose of any of the securities of the Company held by the Lender (other than those securities included in the offering) without the prior written consent of the Company or the underwriters managing such initial underwritten public offering of the Company's securities for a period of 180 days from the effective date of such registration statement, which period may be extended upon the request of the underwriters for an additional period of up to 15 days if the Company issues or proposes to issue an earnings or other public release within 15 days of the expiration of the 180-day lockup period, and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering.

The Lender agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters of such offering which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested, by the Company or the underwriters of such offering, the Lender shall provide, within 10 days of such request, such information as may be required by the Company or such underwriters in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 8(k) shall not apply to a registration relating solely to employee benefits plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the securities subject to the foregoing restriction until the end of the applicable period. The Lender agrees that any transferee of the securities shall be bound by this Section 11(e).

(f) No Rights or Liabilities as a Stockholder. This Note does not by itself entitle the Lender to any voting rights or other rights as a stockholder of the Company. In the absence of conversion of this Note, no provisions of this Note, and no enumeration herein of the rights or privileges of the Lender, shall cause the Lender to be a stockholder of the Company for any purpose.

(g) Finder's Fee. Each party represents that it neither is nor will be obligated for any finder's fee or commission in connection with this transaction. Lender agrees to indemnify and to hold harmless the Company from any liability for any commission or compensation in the nature of a finder's fee (and the costs and expenses of defending against such liability or asserted liability) for which Lender or any of its officers, partners, employees or representatives is responsible. The Company agrees to indemnify and hold harmless Lender from any liability for any commission or compensation in the nature of a finder's fee (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

(h) Officers and Directors not Liable. In no event shall any officer or director of the Company be liable for any amounts due and payable pursuant to this Note.

(i) Severability. If one or more provisions of this Note are held to be unenforceable under applicable law, such provision shall be excluded from this Note and the balance of the Note shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

(j) Specific Enforcement. It is agreed and understood by the Company that monetary damages would not adequately compensate the Lender for any breach of this Note by the Company, and, accordingly, that this Note and, in particular, the terms relating to conversion of this Note into the equity securities of the· Company, shall be specifically enforceable, and that any breach or threatened breach of this Note shall be the proper subject of a temporary or permanent injunction or restraining order without a requirement of posting bond. Further, the Company hereby waives any claim or defense that there is an adequate remedy at law for such breach or threatened breach.

(k) Usury. In the event any interest is paid on this Note which is deemed to be in excess of the then legal maximum rate, then that portion of the interest payment representing an amount in excess of the then legal maximum rate shall be deemed a payment of principal and applied against the principal of this Note.

(l) Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Note.

(m) Acknowledgement. In order to avoid doubt, it is acknowledged that the Lender shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company issuable upon conversion of the Preferred Stock of the Company which occur prior to the conversion of the Note, including, without limitation, any increase in the number of shares of Common Stock issuable upon conversion as a result of a dilutive issuance of capital stock.

[*Remainder of Page Intentionally Left Blank*]

The Company has caused this Convertible Promissory Note to be issued as of the date first written above.

HEAT BIOLOGICS, INC

By: _____
Jeff Wolf, President & CEO

ACKNOWLEDGED AND AGREED:

LENDER

XXXX

By: _____

Name: _____

Title: _____

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

Schedule A

Schedule of Advances

Date of Advance	**Advance Amount**	**Signature of Company**
		_____
		_____
		_____
		_____
		_____
		_____

EXHIBIT 10.18

AMENDMENT TO LICENSE AGREEMENT (UM97-14)

Amendment to the License Agreement (the "Amendment") dated the 11th day of July, 2008 (the "Effective Date"), by and between the University of Miami and its School of Medicine ("LICENSOR"), and HEAT BIOLOGICS, INC., a Delaware corporation ("LICENSEE"), under the direction of Dr. Eckhard Podack, to wit: LICENSE AGREEMENT relating to the technology and product identified as the Podack Cancer Vaccine ***(VM97-14)*** , and hereinafter referred to as "License Agreement".

WHEREAS, LICENSOR and LICENSEE entered into that certain Stockholders Agreement dated the 11th day of July, 2008, granting to the LICENSOR certain rights to participate in future stock offerings by the LICENSEE (hereinafter referred to as the "Stockholders Agreement"); and

WHEREAS, LICENSOR is the owner and holder of eight percent (8%) of all issued and outstanding common stock of LICENSEE in each class and series on a fully-diluted basis pursuant to the terms and conditions of the License Agreement; together with the University of Miami Investor Rights Agreement effective July I 1, 2008, and the Common Stock Subscription Agreement dated July 1, 2008; and

WHEREAS, LICENSEE has a past due and outstanding license issue fee obligation to LICENSOR, as set forth in section 8.1(a) of the License Agreement, as follows:

One hundred fifty thousand ($150,000.00) dollars obligation, past due and outstanding, to wit: Payable within thirty (30) days of the Effective Date, on or before August 11, 2008; and

WHEREAS, LICENSEE has past due and outstanding patent fees and costs obligations to LICENSOR in the amount of eleven thousand seventeen and 09/1 00 ($11, 017.09) dollars pursuant to section 5.1 of the License Agreement; and

WHEREAS, LICENSEE has a past due and outstanding license issue fee obligation together with past due and outstanding patent fees and costs obligations to LICENSOR pursuant to the License Agreement, in the total amount of one hundred sixty one thousand seventeen and *09/100* ($161,017.09) dollars; and

WHEREAS, LICENSEE has requested an extension of the payment dates for past due license issue fees together with past due patent fees and costs, and LICENSOR desires to extend the foregoing payment dates.

NOW THEREFORE, for the mutual promises and other good and valuable consideration contained herein, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

LICENSOR agrees to extend the payment dates of the foregoing past due license issue fee together with past due patent fees and costs owed by LICENSEE pursuant to the License Agreement, under the following terms and conditions:

1. LICENSOR shall extend the payment deadline of all past due license issue fees and past due patent fees and costs under the License Agreement, in the total amount of one hundred sixty one thousand seventeen and *09/100* ($161,017.09) dollars to August 11, 2009 (the "Extension Date")

2. LICENSOR shall be issued two and one half percent (2.5%) fully-dilutable common shares of the total number of LICENSEE common shares issued and outstanding, which stock issuance shall be evidenced as follows:

Section 8.5 of the License Agreement is hereby amended and restated in its entirety to read as follows:

As partial consideration for the license granted pursuant to this Agreement, LICENSEE shall issue to LICENSOR a fully paid, nonassessable number of common shares equal to eight percent (8%) of the total number of LICENSEE issued and outstanding common shares in each class and series on a fully-diluted basis, at all times until and including the later of such time that LICENSEE has received more than two million dollars ($2,000,000) in cash proceeds after the Effective Date of this Agreement from equity investments by parties unaffiliated with LICENSEE as of the Effective Date of this Agreement ("Qualified Investment"). For the avoidance of doubt, such anti-dilution protection for the foregoing shares shall continue to apply through the duration of and until immediately after, the Qualified Investment pursuant to this Agreement and any Amendments thereto, whichever is later. Furthermore, LICENSEE shall issue to LICENSOR fully-dilutable common shares equal to two and one half percent (2.5%) of the total number of LICENSEE common shares in each class and series issued and outstanding. LICENSEE shall affect the issuance of the foregoing fully-diluted shares by concurrent execution of an appropriate Stockholders Agreement, Investor Rights Agreements, and Common Stock Subscription Agreement, together with appropriate Amendments thereto evidencing the foregoing issuance of such fully-dilutable common shares to LICENSOR, the terms of which are incorporated by reference herein.

3. LICENSEE shall pay LICENSOR, as additional consideration for the payment Extension Date granted by LICENSOR under this Amendment, the sum of twelve thousand five hundred ($12,500.00) dollars, to be due and payable on or before such Extension Date.

4. LICENSOR hereby reserves the right, at its sale and absolute discretion, to seek any and all remedies available at law or in equity, for the nonpayment by the LICENSEE of any and all license issue fees together with patent fees and costs due and payable by the Extension Date.

5. LICENSOR and LICENSEE mutually agree and confirm that the following sections of the License Agreement remain in full force and effect, and agree to be bound by the terms and conditions specified therein: section 6. entitled INDEMNIFICATION, section 21. entitled AMENDMENT, and section 25. entitled ENTIRE AGREEMENT. LICENSOR and LICENSEE further mutually agree and confirm that in all other respects the License Agreement shall remain in full force and effect in accordance with all other terms and conditions specified therein, and agree to be bound by the terms and conditions set forth therein.

This Amendment is entered into and made effective as of the last signature date set forth below.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date set forth below.

LICENSOR:

UNIVERSITY OF MIAMI

By: _____
Bart Chernow, M.D.
Director of UM Innovation Vice
Provost of Technology

Date: _____ Advancement

LICENSEE:

HEAT BIOLOGICS, INC.

By: _____
Jeffrey Wolf
President

Exhibit 10.19

FIRST AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This First Amendment to Loan and Security Agreement (the ***"Amendment"),*** is entered into as of November 30, 2012 by and between SQUARE I BANK (the***"Bank")*** and HEAT BIOLOGICS. INC. and HEAT BIOLOGICS I, INC. (collectively known as the ***"Borrower").***

RECITALS

Borrower and Bank arc parties 10 that certain Loan and Security Agreement dated as of August 7, 2012 (as amended from time to time, the***"Agreement").*** The parties desire to amend the Agreement in accordance with the terms of this Amendment.

NOW THEREFORE the parties agree as follows:

1) Bank and Borrower hereby acknowledge and agree that, until Borrower's achievement of the Equity Milestone, as more particularly described in Section 6.7(b) of the Agreement (as in effect as of the date of this Amendment), Borrower shall not request, and Bank shall not be obligated to make, any additional Credit Extensions under the Agreement.

2) Bank hereby waives Borrower's existing violation of the Term Sheet Milestone covenant, as more particularly described in Section 6.7(b) of the Agreement (as in effect immediately prior to the date of this Amendment).

3) Section 6.7(b) of the Agreement is hereby amended and restated, as follows:

(b) Equity Milestone. On or before December 15, 2012, Borrower shall have received at least $5,000,000 in net Cash proceeds from the sale or issuance of Borrower's equity securities to investors acceptable to Bank.

4) The defined term "Term Sheet Milestone" and its definition in Exhibit A to the Agreement are hereby deleted.

5) Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

6) Borrower represents and warrants that the representations and warranties contained in the Agreement arc true and correct as of the date of this Amendment.

7) This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

8) As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

a) this Amendment, duly executed by Borrower;

b) payment of all Bank Expenses, including Bank's expenses for the documentation of this Amendment and any related documents, which may be debited from any of Borrower's accounts; and

c) such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[Signature Page to Follow]

IN WITNESS WHEREOF the undersigned have executed this Amendment as of the first date above written.

HEAT BIOLOGICS, INC.		**SQUARE 1 BANK**	
By:	/s/ Jeff Wolf	By:	
Name:	Jeff Wolf	Name:	
Title:	CEO	Title:	

HEAT BIOLOGICS I, INC.

By:	/s/ Jeff Wolf
Name:	Jeff Wolf
Title:	CEO

Exhibit 10.20

SECOND AMENDMENT TO LICENSE AGREEMENT (UMSS-114)

Second Amendment to the License Agreement ("Amendment 2") dated the 11th day of July, 2008 (the "Effective Date"), together with that certain Amendment thereto dated April 29, 2009 ("Amendment 1 "), by and between the University of Miami and its School of Medicine ("LICENSOR"), and HEAT BIOLOGICS I, INC., a Delaware corporation ("LICENSEE"), under the direction of Dr. Eckhard Podack, to wit: LICENSE AGREEMENT relating to the technology and product identified as the Podack Cancer Vaccine (UMSS-114) , and hereinafter referred to as "License Agreement".

WHEREAS, LICENSEE has a past due and outstanding license issue fee obligation to LICENSOR, as set forth in section 8.1 (a) of the License Agreement, as follows:

One hundred fifty thousand ($150,000.00) dollars obligation, past due and outstanding, to wit: Payable within thirty (30) days of the Effective Date, on or before August 11, 2008; and

WHEREAS, LICENSEE has past due and outstanding patent fees and costs obligations to LICENSOR in the amount of eleven thousand seventeen and 09/100 ($11, 017.09) dollars pursuant to section 5.1 of the License Agreement; and

WHEREAS. LICENSEE has a past due and outstanding consideration payment to LICENSOR in the amount of twelve thousand five hundred ($12,500.00) dollars, for the payment extension granted by LICENSOR in Amendment 1; and

WHEREAS, LICENSEE has a past due and outstanding license issue fee obligation together with past due and outstanding patent fees and costs obligations to LICENSOR pursuant to the License Agreement, and a past due and outstanding consideration payment to LICENSOR pursuant to Amendment 1, in the total amount of one hundred seventy three thousand five hundred seventeen and 09/100 ($173,517.09) dollars; and

WHEREAS, LICENSEE has requested an extension of the payment dates for past due license issue fees, past due patent fees and costs, together with the past due consideration payment, and LICENSOR desires to extend the foregoing payment dates.

NOW THEREFORE, for the mutual promises and other good and valuable consideration contained herein, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

LICENSOR agrees to extend the payment dates of the foregoing past due license issue fee together with past due patent fees and costs owed by LICENSEE pursuant to the License Agreement, together with the past due consideration payment owed by LICENSEE pursuant to Amendment 1, under the following terms and conditions:

1 LICENSOR shall extend the payment deadline of all past due license issue fees and past due patent fees and costs under the License Agreement, , in the total amount of one hundred sixty one thousand seventeen and 09/100 ($161,017.09) dollars to February 11, 2010 (the "Extension Date").

2 LICENSEE shall pay LICENSOR as additional consideration for the payment Extension Date granted by LICENSOR under this Amendment 2, the sum often thousand ($10,000.00) dollars to be due and payable upon the execution of this Amendment 2. Furthermore, LICENSEE shall pay LICENSOR the past due and outstanding

consideration payment to LICENSOR in the amount of twelve thousand five hundred ($12,500.00) dollars, for the payment extension granted by LICENSOR in Amendment 1, on or before September 11,2009. LICENSOR and LICENSEE further mutually agree that in the event LICENSEE does not meet the foregoing past due payment obligation, LICENSOR shall have the option in LICENSOR's sole and absolute discretion, to declare this Amendment 2 null and void.

3 LICENSOR hereby reserves the right, at its sole and absolute discretion, to seek any and all remedies available at law or in equity, for the nonpayment by the LICENSEE of any and all license issue fees, patent fees and costs, together with past due consideration payments due and payable by the Extension Date.

4 LICENSOR and LICENSEE mutually agree and confirm that the following sections of the License Agreement remain in full force and effect, and agree to be bound by the terms and conditions specified therein: section 6. entitled INDEMNIFICATION, section 21. entitled AMENDMENT, and section 25. entitled ENTIRE AGREEMENT. LICENSOR and LICENSEE further mutually agree and confirm that in all other respects the License Agreement shall remain in full force and effect in accordance with all other terms and conditions specified therein, and agree to be bound by the terms and conditions set forth therein.

5 LICENSOR and LICENSEE mutually agree and confirm that paragraphs 3. and 4. shall survive any nullification of this Amendment 2 by LICENSOR.

This Amendment 2 is entered into and made effective as of the last signature date set forth below.

IN WITNESS WHEREOF, the parties have executed this Amendment 2, as of the date set forth below.

LICENSOR:

UNIVERSITY OF MIAMI

BY: /s/ Bart Chernow, M.D.
Bart Chernow, M.D.
Director of UM Innovation
Vice Provost of Technology Advancement

Date: *August 11, 2009*

LICENSEE:

HEAT BIOLOGICS I, INC.

By: /s/ Jeffrey Wolf
Jeffrey Wolf
President

Exhibit 10.21

EXCLUSIVE LICENSE AGREEMENT
University of Michigan File 3680

This Agreement is effective as of July 22, 2011 (the "Effective Date"), between Heal Biologics, Inc. ("LICENSEE") having the address in Article II below, and the Regents of the University of Michigan, a constitutional corporation of the stale of Michigan ("MICHIGAN"). LICENSEE and MICHIGAN agree as follows:

ARTICLE 1-DEFINITIONS

1.1 "FIELD OF USE" means the production and use of therapeutics that include bladder cancer cells, and specifically excludes the use of Materials for discovery of any other therapeutic.

1.2 "FIRST COMMERCIAL SALE" means the first sale, rental or lease of any LICENSED PRODUCT or first commercial use of any LICENSED PROCESS by LICENSEE or a SUBLICENSEE, other than sale of. LICENSED PRODUCT or use of. LICENSED PROCESS for use in terms, such as field trials or clinical trials, being conducted to obtain FDA or other governmental approvals to market LICENSED PRODUCTS or otherwise commercially use LICENSED PROCESSES.

1.3 "LICENSED PRODUCT(S)" means any product that:

(a) is or includes the materials supplied by MICHIGAN and identified by the following: bladder cancer cell lines UM-UC-3, 9, and 13 (the "Materials"); or

(b) the following as produced by LICENSEE ("Derivatives"): purified or fractionated subsets of the Materials; any modified cells or cell lines produced by using the Materials; progeny, clones, subclones, mutants, or derivatives of the Materials; or

(c) includes a substantial and identifiable portion of the Materials or Derivatives.

1.4 “"LICENSED PROCESS(ES),” means any process, method, or service that includes the use of. LICENSED PRODUCT.

1.5 "NET SALES" means the amounts received, on sales, rental or lease, however characterized, by LICENSEE and/or SUBLICENSEES of LICENSED PRODUCTS and uses of LICENSED PROCESSES, less:

(a) credits or refunds actually allowed for spoiled, damaged, outdated, or returned goods;

(b) sales and other excise taxes imposed and actually paid directly with respect to the amounts received; and

(c) actual freight expenses between LICENSEE and customers, to the extent such expenses are not charged to or reimbursed by customers.

1.6 "SUB LICENSEE(S)" means any person or entity sublicensed, or granted an option for R sublicense, by LICENSEE under this Agreement

1.7 "TERRITORY" means worldwide.

ARTICLE 2 -GRANT OF LICENSE

2.1 MICHIGAN hereby grants to LICENSEE an exclusive license, subject to the terms and conditions of this Agreement, in the FIELD OF USE and the TERRITORY to use, market, offer or sale and sell LICENSED PRODUCT IS and to practice LICENSED PROCESSES. This license includes the right to grant sublicenses.

2.2 MICHIGAN has transferred to LICENSEE adequate amounts of the Materials. LICENSEE may request reasonable quantities of Materials directly from the European Collection of Cell Cultures.

2.3 MICHIGAN reserves the right to make and use the Materials as defined by Paragraph l.3(a) for research, public service, internal (including clinical) and/oreducational purposes and to make derivatives along with the right to grant the same limited rights to other nonprofit research institutions.

2.4 LICENSEE agrees that LICENSED PRODUCTS used, leased or sold in the United States shall be manufactured substantially in the United States. At LICENSEE's request, MICHIGAN will apply for a waiver of the U.S. manufacturing requirement. LICENSEE shall cooperate with MICHIGAN and provide all requested information in support of such waiver application.

2.5 To the extent that the following grant may be required by research funding agreements between MICHIGAN and the United States Government. MICHIGAN reserves the right to grant to the United States Government nonexclusive, nontransferable, irrevocable, paid-up licenses to practice or have practiced the Materials for or on behalf of the United States throughout the world.

ARTICLE 3 -CONSIDERATION

3.1 LICENSEE shall pay the following royalties to MICHIGAN:

(a) A License Issue Fee of Ten Thousand Dollars ($10,000). Such License Issue Fee shall ~nonrefundable and is due fourteen days (14) from the complete execution of this Agreement.

(b) LICENSEE shall pay to MICHIGAN an Annual License Maintenance Fee ("Annual Fee"). This Annual Fee is accrued on June 30 of the years specified below, and is payable with the semi-annual report for the ROYALTY PERIOD in which the Annual Fee accrues. LICENSEE may credit each Annual Fee in full against all royalties otherwise due MICHIGAN for the prior July I through the June 30 on which the Annual Fee accrues. The annual fees are:

(1) In 2012 and in each year thereafter prior to FIRST COMMERCIAL SALE: $XXXX.
(2) After FIRST COMMERCIAL SALE and in each year thereafter during the term of this Agreement: $XXXX.

Should this Agreement terminate or expire other than on a June 30. the Annual Fee for such portion of a year shall be determined by multiplying the amount SCI forth above for the given year by n fraction, the numerator of which shall be the number of days since the prior June 30 during which the Agreement is in effect and the denominator of which shall be three hundred and sixty-five.

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

(c) LICENSEE shall pay to MICHIGAN Milestone Payments follows:

(1) $XXXX upon completion of Phase I clinical trials or the equivalent in a foreign country for LICENSED PRODUCT by LICENSEE or SUBLICENSEE;
(2) $XXXX upon completion of Phase II clinical trials or the equivalent in a foreign country for LICENSED PRODUCT by LICENSEE or SUBLICENSEE;
(3) $XXXX upon completion of Phase III clinical trials or the equivalent in a foreign country for LICENSED PRODUCT by LICENSEE or SUBLICENSEE;
(4) $XXXX upon the FIRST COMMERCIAL SALE of LICENSED PRODUCT by LICENSEE or SUBLICENSEE;
(5) $XXXX upon annual NET SALES of LICENSED PRODUCT by LICENSEE or SUBLICENSEE equal to or more than $XXXX.

Milestone Payments are non-refundable and non-creditable.

3.2 LICENSEE shall be responsible for the payment of all taxes, duties, levies, and other charges imposed by any taxing authority with respect to the royalties payable to MICHIGAN under this agreement. Should LICENSEE be required under any law or regulation of any government entity or authority to withhold or deduct any portion or the payments on royalties due to MICHIGAN. then the sum payable to MICHIGAN shall be increased by the amount necessary to yield to MICHIGAN an amount equal to the sum it would have received had no withholdings or deductions been made. MICHIGAN shall cooperate reasonably with LICENSEE in the event LICENSEE elects to assert, at its own expense, MICHIGAN's exemption from any such tax or deduction.

3.3 Payments shall be paid to the "Regents of the University of Michigan" in United States dollars in Ann Arbor, Michigan., sent as provided in Article II. In computing royalties, LICENSEE shall convert any revenues it receives in foreign currency into its equivalent in United States dollars at the exchange rate LICENSEE ordinarily employs in making reports to relevant regulatory and taxing authorities, consistent with fair business practices and generally accepted accounting principles.

3.4 All amounts due under this Agreement shall. if overdue, be subject to a charge of interest compounded monthly until payment, at a per annum rate of two percent (2%) above the prime rate in effect it the JP Morgan Chase & Co. or its successor bank on the due date (or at the highest allowed rate if a lower rate is required by law) or $250, whichever is greater. The payment of such interest shall not foreclose MICHIGAN from exercising any other rights it may have resulting from any late payment. LICENSEE shall reimburse MICHIGAN for the costs. including reasonable attorney fees for expenses paid in order to collect any amounts overdue more than 120 days.

ARTICLE 4 • REPORTS

4. 1 Until the FIRST COMMERCIAL SALE, LICENSEE shall provide to MICHIGAN written annual upon on or before July 30 of each year. The annual report shall include: reports of progress on research and development. regulatory approvals, manufacturing, sublicensing, marketing and sales during the preceding twelve (12) months. and plans for the coming year. LICENSEE also shall report to MICHIGAN the date of the FIRST COMMERCIAL SALE in each county' within thirty (30) days of occurrence.

4.2 After the FIRST COMMERCIAL SALE, LICENSEE shall provide semi-annual response to MICHIGAN. By each July 30 and January 31, LICENSEE shall report to MICHIGAN for each period:

Portions herein identified by [XXXX] have been omitted pursuant to a request for confidential treatment under Rule 406 of the Securities Act of 1933, as amended. A complete copy of this document has been filed separately with the Securities and Exchange Commission

(a) amount of LICENSED PRODUCTS sold, leased or distributed by LICENSEE and each SUBLICENSEE.
(b) NET SALES of LICENSED PRODUCTS sold by LICENSEE and SUBLICENSEES.
(c) accounting for all LICENSED PROCESSES used or sold by LICENSEE and all SUBLICENSEES, including NET SALES.
(d) foreign currency conversion rate and calculations (if applicable) and total royalties due.
(e) names and addresses of all SUBLICENSEES having a sublicense or option therefor any time during the particular period.
(f) for each sublicense or amendment thereto completed in the particular period, the dale or each agreement and amendment, the territory or the sublicense, the scope of the sublicense, and the nature. timing and amounts of all fees and royalties to be paid thereunder.
(g) any milestone (under Article 3 or Article 5) that has been achieved, and any milestone that was due during the specified period but not achieved, specifying each milestone and whether or not it was achieved.

LICENSEE shall include the amount of all payments due, and the various calculations used to arrive at those amounts. including the quantity, description (nomenclature and type designation IS described in Paragraph 4.3 below), country or manufacture and country of sale or LICENSED PRODUCTS and LICENSOR PROCESSES. LICENSEE shall direct its authorized representative to certify that response required hereunder are correct to the best or LICENSEE's knowledge and information. Failure to provide reports as required under this Article 4 shall be a material breach or this Agreement.

If no payment is due. LICENSEE shall so report to MICHIGAN that no payment is due.

4.3 LICENSEE shall promptly establish and consistently employ a system of specific nomenclature and type designations for LICENSED PRODUCTS and LICENSED PROCESSES to permit identification and segregation of various types where necessary. LICENSEE shall consistently employ, and shall require SUBLICENSEES to consistently employ, the system when rendering invoices thereon and shall inform MICHIGAN, or its auditors, when requested, as to the details concerning such nomenclature system, all additions thereto and changes therein.

4.4 LICENSEE shall keep, and shall require SUBLICENSEES to keep, true and accurate records containing data reasonably required for the computation and verification of payments due under this Agreement. LICENSEE shall, and it shall require all SUBLICENSEES to: (a) open such records for inspection upon reasonable notice during business hours (but not more than once per year) by an independent certified public accountant selected by MICHIGAN and reasonably acceptable by LICENSEE for the purpose of verifying the amount of payments due: and (b) retain such records for six. (6) years from date of origination.

The terms of this Article shall survive any termination of this Agreement. MICHIGAN is responsible for all expenses of such inspection, except that if any inspection reveals an underpayment greater than five percent (5%) of royalties due MICHIGAN, then LICENSEE shall pay all expenses of that inspection and the amount of the underpayment and interest to MICHIGAN within twenty one (21) days of written notice thereof. LICENSEE shall also reimburse MICHIGAN for reasonable expenses required to collect the amount underpaid.

ARTICLE 5 -DILIGENCE

5.1 LICENSEE shall use commercially reasonable efforts to bring one or more LICENSED PRODUCTS to market or one or more LICENSED PROCESSES to commercial use through a thorough, vigorous and diligent program for exploiting the same and to continue active, diligent marketing efforts for one or more LICENSED PRODUCTS or LICENSED PROCESSES throughout the life of this Agreement. LICENSEE has the responsibility to use commercially reasonable efforts to obtain and retain any governmental approvals to manufacture and/or sell LICENSED PRODUCTS and/or use LICENSED PROCESSES for all relevant activities of LICENSEE and SUBLICENSEES.

5.2 As part of the diligence required by Paragraph 5.1, LICENSEE agrees to reach the following commercialization and research and development milestones for the LICENSED PRODUCTS and LICENSED PROCESSES (together the "MILESTONES'") by 'he following dates:

1) Completion of Phase I Clinical Trial on or before January 1, 2015.

2) Completion of Phase II Clinical Trial on or before January 1, 2017.

3) Completion of Phase III Clinical Trial on or before January 1, 2019.

4) FIRST COMMERCIAL SALE on or before January 1, 2020.

5.3 LICENSEE must achieve the MILESTONES on or before the deadline dates indicated. If LICENSEE fails to meet any MILESTONE under Paragraph 5.2 MICHIGAN may terminate this AGREEMENT effective on thirty (30) days prior written notice to LICENSEE, subject, however, to the rights of any SUBLICENSEE granted pursuant to Paragraph: provided, however , that any such termination shall not be effective if LICENSEE: (a) actually achieves such MILESTONE during such thirty (30) day period or (b) demonstrates that LICENSEE has used commercially reasonable efforts to achieve such MILESTONE over the entire course of this AGREEMENT. If, as of the close of such thirty (30) day period, there is a dispute as to whether LICENSEE has met the condition set forth in clause (a) or (b) of the preceding sentence, then such thirty (30) day period shall be automatically extended for thirty (30) days, during which time the parties shall hold good faith discussions in order to resolve such dispute. If the parties ultimately agree that LICENSEE has met the condition set forth in clause (b) above, the termination shall be deemed ineffective, and the panics shall negotiate in good faith a revised deadline for achieving such MILESTONE. In addition, regardless of whether LICENSEE can demonstrate that LICENSEE has met the condition set forth in clause (b) above, LICENSEE shall have the opportunity to present a revised timeline for achieving the MILESTONE at issue, and the approval to revise the timeline from MICHIGAN shall not be unreasonably withheld, provided that LICENSEE is otherwise in compliance with its other obligations under this AGREEMENT.

ARTICLE 6 -SUBLICENSING

6.1 LICENSEE shall notify MICHIGAN in writing of every sublicense agreement and each amendment thereto within thirty (30) days after their execution, and indicate the name of the SUBLICENSEE and its number of employees the territory of the sublicense the scope of the sublicense and the nature timing and amounts of all fees and royalties to be paid thereunder. Upon request, LICENSEE shall provide MICHIGAN with a copy of sublicense agreements.

6.2 LICENSEE shall not receive from SUBLICENSEES anything of value other than cash payments in consideration or any sublicense under this Agreement, without the express prior written permission of MICHIGAN.

6.3 Each sublicense granted by LICENSEE under this Agreement shall provide for its termination upon termination of this Agreement. Each sublicense shall terminate upon termination of this Agreement unless LICENSEE has previously assigned its rights under the sublicense to MICHIGAN and MICHIGAN has agreed at its sole discretion in writing to such assignment.

6.4 LICENSEE shall require that all sublicenses:

(1) be consistent with the terms and conditions of this Agreement;

(2) contain the SUBLICENSEE'S acknowledgment of and agreement to the disclaimer of warranty by MICHIGAN and limitation on MICHIGAN's liability as provided by Article 7 below; and

(3) contain provisions under which the SUBLICENSEE accepts duties at least equivalent to those accepted by the LICENSEE in the following Articles: 4.4 (duty to keep records); 7.4 (duty to avoid improper representations or

responsibilities); 8.1 (duty to defend, hold harmless, and indemnify MICHIGAN); 8.3 (duty to maintain insurance); 8.4 (e) (exclusion of certain damages): 8.5 (duty regarding handling); 12.6 (duty to restrict the use of MICHIGAN's name): 12.8 (duty to control exports).

ARTICLE 7 NO WARRANTIES; LIMITATION ON MICHIGAN'S LIABILITY

7.1 MICHIGAN including its Regents, fellows, officers, employees and agents, makes no representations or warranties that the manufacture, importation, use, of the for sale, sale or other distribution of any LICENSED PRODUCTS or use of LICENSED PROCESSES will not infringe upon any patent or other rights.

7.2 MICHIGAN, INCLUDING ITS REGENTS, FELLOWS, OFFICERS, EMPLOYEES AND AGENTS. MAKES NO REPRESENTATIONS, EXTENDS NO WARRANTIES OF ANY KIND. EITHER EXPRESS OR IMPLIED. INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AND ASSUMES NO RESPONSIBILITIES WHATEVER WITH RESPECT TO DESIGN, DEVELOPMENT, MANUFACTURE, USE. SALE OR OTHER DISPOSITION BY LICENSEE OR SUBLICENSEES, OF LICENSED PRODUCTS OR LICENSED PROCESSES.

7.3 LICENSEE AND SUBLICENSEES ASSUME THE ENTIRE RISK AS TO PERFORMANCE OF LICENSED PRODUCTS AND LICENSED PROCESSES. In no event shall MICHIGAN, including its Regents, fellows, officers, employees and agents, be responsible or liable for any direct. Indirect, special, incidental, or consequential damages or lost profits or other economic loss or damage with respect to LICENSED PRODUCTS or LICENSED PROCESSES to LICENSEE. SUBLICENSEES or any other individual or entity regardless of legal or equitable theory. The above limitations on liability apply even though MICHIGAN, its Regents, fellows, officers, employees or agents may have been advised of the possibility of such damage.

7.4 LICENSEE shall not and shall require that its SUBLICENSEES do not, make any statements. representations or warranties whatsoever to any person or entity, or accept any liabilities or responsibilities whatsoever from any person or entity that are inconsistent with any disclaimer or limitation included in this Article 7.

ARTICLE 8 .INDEMNITY; INSURANCE

8.1 LICENSEE shall defend, indemnify and hold harmless and shall require SUBLICENSEES to defend, indemnify and hold harmless MICHIGAN, including its Regents, fellows, officers, employees, students. and agents, for and against any and all claims, demands, damages, losses, and expenses of any nature (including attorneys' fees and other litigation expenses) resulting from but not limited to, death, personal injury, illness, property damage, economic loss or products liability arising from or in connection with, any of the following: (1) Any manufacture, use, sale or other disposition by LICENSEE. SUBLICENSEES or transferees of LICENSED PRODUCTS or LICENSED PROCESSES; (2) The direct or indirect use by any person of LICENSED PRODUCTS made, used, sold or otherwise distributed by LICENSEE or SUBLICENSEES; and (3) The use or promise by LICENSEE or SUBLICENSEES of any invention or computer software related to LICENSED PRODUCTS or LICENSED PROCESSES.

8.2 MICHIGAN is entitled 10 participate at is option and expense through counsel of its own selection, and may join in any legal actions related to any such claims. demands, damages, losses and expenses under Paragraph 8.1 above. LICENSEE shall not settle any such legal action with an admission of liability of MICHIGAN without MICHIGAN’s written approval, and MICHIGAN shall not settle any such legal action without LICENSOR's written approval.

8.3 Prior to any use of any LICENSED PRODUCT in a human being or use of any LICENSED PROCESS on a human being by LICENSEE. LICENSEE shall purchase and maintain in effect commercial general liability

insurance, including product liability insurance and errors and omissions insurance which shall protect LICENSEE and MICHIGAN with respect the events covered by Paragraph 8.1. Prior to any use of any LICENSED PRODUCT in a human being or use of any LICENSED PROCESS on a human being by a SUBLICENSEE. LICENSEE shall require that the SUBLICENSEE purchase and maintain in effect commercial general liability insurance. including product liability insurance and errors and omissions insurance which shall protect LICENSEE. SUBLICENSEE, and MICHIGAN with respect to the events covered by Paragraph 8.1. Each such insurance policy must provide reasonable coverage for all claims with respect to any LICENSED PROCESS used and any LICENSED PRODUCTS manufactured, used. sold, licensed or otherwise distributed by LICENSEE .• or, in the case of a SUBLICENSEE's policy, by said SUBLICENSEE and must specify MICHIGAN including its Regents, fellows, officers and employees, as an additional insured. LICENSEE shall furnish certificate(s} of such insurance 10 MICHIGAN, upon request.

8.4 In no event shall either party hereunder shall be liable to the other for any special. indirect, or consequential damages of any kind whatsoever resulting from any breach or default of this Agreement.

8.5 LICENSEE agrees to handle, store, use, and dispose of LICENSED PRODUCTS and LICENSED PROCESSES in compliance with all applicable laws, regulations and guidelines, and in accordance with safe and prudent practices. LICENSEE shall require the same of any transferees of LICENSED PRODUCTS and SUBLICENSEES (to the extent otherwise permitted hereunder).

8.6 LICENSEE agrees to utilize adequate systems, procedures and personnel to review and oversee arrangements for the receipt, handling, storage. use and disposal of materials of the nature of LICENSED PRODUCTS and LICENSED PROCESSES and that it will ensure that 011 persons involved in retrieving, hand ling. storing. using or disposing of LICENSED PRODUCTS and LICENSED PROCESSES are adequately qualified by training and experience to do so safely and legally.

ARTICLE 9· TERM AND TERMINATION

9.1 If LICENSEE ceases to carry on its business this Agreement shall terminate upon written notice by MICHIGAN.

9.2 If LICENSEE fails to make any payment due to MICHIGAN, upon thirty (30) days' written notice by MICHIGAN, this Agreement shall automatically terminate unless MICHIGAN specifically extends such dale in writing or LICENSEE remits the due payment to MICHIGAN within the thirty day period. Such termination shall not foreclose MICHIGAN from collection any amounts remaining unpaid or seeking other legal relief.

9.3 Upon any material breach or default of this Agreement by LICENSEE other than those occurrences listed in Paragraphs 5.3, 9.1 and 9.2 (the terms of which shall take precedence over the handling of any other material breach or default under this Paragraph), MICHIGAN has the right to terminate this Agreement effective on sixty (60) days' written notice to LICENSEE. Such termination shall become automatically effective upon expiration of the sixty day period unless LICENSEE cures the material breach or default before the period expires.

9.4 LICENSEE has the right to terminate this Agreement at any time by providing written notice to MICHIGAN if LICENSEE:

(a) pays all amounts due MICHIGAN through the effective date of the termination;
(b) submits a final report of the type described in Paragraph 4.2;
(c) returns any confidential or trade-secret materials provided to LICENSEE by MICHIGAN in connection with this Agreement, or, with prior approval by MICHIGAN, destroys such materials, and certifies in writing that such materials have all been returned or destroyed; and
(d) suspends its manufacture, use and sale of the LICENSED PROCESS(ES) AND LICENSED PRODUCT(S) (subject to Paragraph 9.5 below).

Upon notice of intent to terminate, MICHIGAN may elect 10 immediately terminate this Agreement upon written notice.

9.5 Upon any termination of this Agreement, and except as provided herein, all rights and obligations of the parties hereunder shall cease, except any previously accrued rights and obligations and further as follows;

(1) obligations to pay royalties and other sums, or other consideration accruing hereunder up 10 the day of such termination, whether or not this Agreement provides for a number of days before which actual payment is due and such date is after the day of termination;

(2) MICHIGAN's rights to inspect books and records as described in Article 4, and LICENSEE's obligations to keep such records for the required time;

(3) any cause of action or claim of LICENSEE or MICHIGAN accrued or to accrue because of any breach or default by the other party hereunder;

(4) the provisions of Articles 1.7, 8.9, and 12; and

(5) all other terms, provisions, representations. rights and obligations contained in this Agreement that by their sense and context are intended to survive until performance thereof by either or both parties.

ARTICLE 10 -REGISTRATION AND RECORDATION

10.1 If the terms of this Agreement or any assignment or license under this Agreement are or become such as to require that the Agreement or license or any part thereof be registered with or reported to a national or supranational agency, LICENSEE will. at its expense. undertake such registration or report. Prompt notice and appropriate verification of the act of registration or report or an) agency ruling resulting from it Will be supplied by LICENSEE to MICHIGAN upon request.

10.2 LICENSEE shall also can out at its expense any formal recordation of this Agreement or any license herein granted that the law of any country requires as a prerequisite to enforceability of the Agreement or license in the courts of any such country or for other reasons, and shall promptly furnish to MICHIGAN appropriately verified proof of recordation.

ARTICLE II –NOTICES

11.1 Any notice, request, report or payment required or permitted 10 be given or mode under this Agreement by either party is effective when mailed if sent by recognized overnight carrier or certified mail, electronic mail followed by confirmation by regular U.S. mail, or registered mail (return receipt requested) to the address set forth below or such other address as such party specifics by written notice given in conformity herewith. Any notice. request, report or payment not so given is not effective until actually received by the other party.

To MICHIGAN:
Office of Technology Transfer
University of Michigan
1600 Huron Parkway. 2nd Floor
Ann Arbor, MI 48109-2590
Attn: File No. 3680

To LICENSEE:
Heal Biologics, Inc.
119 Washington Avenue, Suite 401
Miami Beach, FL 33139

Attn: CEO

ARTICLE 12 – MISCELLANEOUS PROVISIONS

12.1 This Agreement shall be construed. governed, interpreted and applied according to United States and State of Michigan law.

12.2 The parties hereby consent to the jurisdiction of the courts in the State of Michigan over any dispute concerning this Agreement or the relationship between the parties. Should LICENSEE bring any claim, demand or other action against MICHIGAN, its Regents, fellows, officers, employees or agents arising out of this Agreement or the relationship between the panics, LICENSEE agrees to bring said action only in the Michigan Court of Claims.

12.3 MICHIGAN and LICENSEE agree that this Agreement sets forth their entire understanding concerning the subject matter of this Agreement. The parties may amend this Agreement from time to lime, but no modification will be effective unless both MICHIGAN and LICENSEE agree to it in writing.

12.4 If a court of competent jurisdiction finds any term of this Agreement invalid, illegal or unenforceable, that term will be curtailed, limited or deleted, but only to the extent necessary to remove the invalidity, illegality or unenforceabitity, and without in any way affecting or Impairing the remaining terms.

12.5 No waiver by either party of any breach of this Agreement, no matter how long continuing or how often repeated, is a waiver of any subset breach thereof, nor is any delay or omission on the part of either party to exercise or insist on any right, power. or privilege hereunder 8 waiver of such right, power or privilege.

12.6 LICENSEE agrees to refrain from using and to require SUBLICENSEES to refrain from using the name of MICHIGAN in publicity or advertising without the prior written approval of MICHIGAN. Reports in scientific literature and presentations of joint research and development work are not publicity. Notwithstanding this provision without prior written approval of MICHIGAN, LICENSEE and SUBLICENSEES may stat. publicly that LICENSED PRODUCTS and PROCESSES were developed by LICENSEE based upon an invention(s) developed at the University of Michigan.

12.7 LICENSEE agrees to comply with all applicable laws and regulations. In particular, LICENSEE understands and acknowledges mat the transfer of certain commodities and technical data is subject to United States laws and regulations controlling the export of such commodities and technical data, including all Export Administration Regulations of the United States Department of Commerce. These laws and regulations prohibit or require a license for the export of certain types of technical data to certain specified countries. LICENSEE agrees to comply with all United Slates laws and regulations controlling the export of commodities and technical data, to be solely responsible for any violation of such laws and regulations by LICENSEE or its SUBLICENSEES, and to defend, indemnify and hold harmless MICHIGAN and its Regents, fellows, officers, employees and agents if any legal action of any nature results from the violation.

12.8 The relationship between the parties is that of independent contractor and contractee. Neither party is an agent of the other in connection with the exercise of any rights hereunder, and neither has any right or authority to assume or create any obligation or responsibility on behalf of the other.

12.9 LICENSEE may not assign this Agreement without the prior written consent of MICHIGAN and shall not pledge any of the license rights granted in this Agreement as security for any creditor. Any attempted pledge of any of the rights under this Agreement or assignment of this Agreement without the prior consent of MICHIGAN will be void from the beginning. No assignment by LICENSEE will be effective until the intended assignee agrees in writing to accept all of the terms and conditions of this Agreement, and such writing is provided to MICHIGAN. Notwithstanding anything herein to the contrary, LICENSEE may, without MICHIGAN's consent, assign its rights under this Agreement to a purchaser of all or substantially all of LICENSEE's business relating to the subject matter of this Agreement, so long as such assignee provides 11 statement in writing 10 MICHIGAN that it agrees to accept all the terms and conditions of this Agreement in the place of LICENSEE.

12.10 If during the term of this Agreement, LICENSEE makes or attempts to make an assignment for the benefit of creditors, or if proceedings in voluntary or involuntary bankruptcy or insolvency arc instituted on behalf of or against LICENSEE, or if n receiver or trustee is appointed for the property of LICENSEE, this Agreement shall automatically terminate. LICENSEE shall notify MICHIGAN or any such event mentioned in this Paragraph as soon as reasonably practicable, and in any event within five (5) days after any such event.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate originals by their duly authorized officers or representatives.

FOR LICENSEE		FOR THE REGENTS OF THE UNIVERSITY OF MICHIGAN	
By:	/s/ Jeff Wolf (authorized representative)	By:	/s/ Kenneth J. Nisbet Kenneth J. Nisbet
Typed Name:	Jeff Wolf		Executive Director,
Title:	CEO		UM Technology Transfer
Date:	July 28, 2011	Date:	July 26, 2011

VAL-964-CHUM

SIGNATURE COPY

BIOLOGICAL MATERIALS LICENSE AGREEMENT

BY AND BETWEEN

VAL-CHUM, LIMITED PARTNERSHIP

AND

HEAT BIOLOGICS INC.

AND TO WHICH INTERVENES
CENTRE HOSPITALIER DE L'UNIVERSITÉ DE MONTREAL

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BIOLOGICAL MATERIALS LICENSE AGREEMENT

THIS AGREEMENT is made and entered in Montreal (Quebec) this 1st day of October, 2011.

BY AND BETWEEN: **VAL-CHUM, LIMITED PARTNERSHIP** , a limited partnership duly constituted under the laws of the Province of Quebec, having its principal place of business at 3535, Queen-Mary road, Suite 220, Montreal, Quebec, Canada, H3V 1H8, acting through its general partner **Gestion Univalor, Limited Partnership**, a limited partnership duly constituted under the laws of the Province of Quebec, Canada, having its principal place of business at the same address, itself acting through its general partner **Univalor Inc.**, a corporation duly constituted and having its head office at the same address herein represented by Philippe Calais, its President and General Manager, duly authorized for the purpose hereof as he so declares;

(hereinafter referred to as: **"Licensor")**

AND: **HEAT BIOLOGICS INC.,** a corporation duly constituted under the laws of Delaware, having a place of business at 119 Washington Avenue, Suite 401, Miami Beach, FL, USA 33139, herein represented by Jeff Wolf, its CEO, duly authorized for the purpose hereof as he so declares;

(hereinafter referred to as: "**Licensee**")

AND TO WHICH INTERVENES: **CENTRE HOSPITALIER DE L'UNIVERSITÉ DE MONTRÉAL**, a legal person duly constituted under the *Act respecting health services and social services*, having its head office at 3840 St-Urbain Street, Montreal, Quebec, Canada H2W 1T8, hereby represented by Sylvain Villiard, General Manager Associate and Jacques Turgeon, Director of research, duly authorized for the purpose hereof, as they so declares;

(hereinafter referred to as : "**CHUM**"**)**

PREAMBLE

WHEREAS Dr. Anne-Marie Mes-Masson and Dr. Diane Provencher has developed at CHUM the cell lines described in Schedule 1.0 (hereinafter called the "**Original Material**");

WHEREAS Licensor's mission is to commercialize research results and intellectual property arising from the research and development activities conducted at CHUM;

WHEREAS at the request of the researchers and CHUM and following the assignment of the intellectual property rights related to the Materials (as this term is hereinafter defined) to the Licensor, Licensor is the owner by assignment of the intellectual property rights in the Materials;

WHEREAS a Study (as this term is hereinafter defined) will be conducted at the University of Miami;

WHEREAS the CHUM has agreed to transfer the Original Material directly to the University of Miami according to the terms and conditions of a Material Transfer Agreement attached hereto as Schedule 2.0;

WHEREAS the Licensee, may eventually need to access, use, manipulate, replicate, modify, make, have made or otherwise exploit the Materials (as this term is hereinafter defined) for commercial purposes described in this Agreement;

NOW, THEREFORE, in consideration of the covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties (as this term is hereinafter defined) hereto agree as follows:

1. INTERPRETATION

1.1 Definition

The following terms used in this Agreement shall have the following meanings:

1.1.1 "**Agreement**" shall mean this present Biological Materials License Agreement, including the preamble and schedules listed in section 1.2.1 hereto and all amendments or restatements, as permitted, and references to "**Article**" mean the specified Article of this Agreement;

1.1.2 "**Affiliate**" shall mean, with respect to any Party, any individual or Entity which, directly or indirectly, Controls, is Controlled by, or is under common Control with, such Party.

1.1.3 "**Control**" means possession, direct or indirect, of the powers to direct or cause the direction of the management of policies of an individual or Entity; whether through ownership or equity participation, voting securities, beneficial contract, agreement or otherwise.

1.1.4 "**Calendar Year**" shall mean a period of twelve (12) months in the Gregorian Calendar;

1.1.5 "**Confidential Information**" shall mean any and all information, whether written, graphic, electronic, communicated orally or otherwise disclosed by or on behalf of one Party ("the **Disclosing Party**") to the other Party ("the **Recipient**") pursuant to this Agreement, which, at the time of disclosure, is reasonably understood as being confidential or proprietary to the Disclosing Party. Such Confidential Information shall specifically include, but not be limited to (a) information relating to the business and research strategies as well as scientific practices of Licensee, Licensor and CHUM, Improvements, information contained in books and records kept by Licensee, accounting and royalty reports provided by Licensee to Licensor pursuant to Article 5, as well as any disclosure, independent of the physical medium through which the information is disclosed, made by the Disclosing Party to the Recipient which, at the time of disclosure, is physically marked as "Confidential" or "Proprietary" and (b) any oral disclosure by the Disclosing Party to the Recipient which shall be treated pursuant to section 9.1. Confidential Information shall exclude information which the Recipient can show by competent evidence: (i) is or becomes public or available to the general public otherwise than through the fault of the Recipient; or (ii) is obtained by the Recipient from a third party who is lawfully in possession of such Confidential Information and is not subject to an obligation of confidentiality or non-use owed to the Disclosing Party; or (iii) is previously known to the Recipient prior to disclosure to the Recipient by or on behalf of the Disclosing Party under this Agreement and not obtained or derived directly or indirectly from the Disclosing Party; or (iv) is independently developed, discovered or arrived at by the Recipient without use of the Confidential Information; or (v) is disclosed by the Recipient pursuant to a requirement of law provided, however, that the Recipient promptly notifies the Disclosing Party of this requirement in writing, and co-operates reasonably with the Disclosing Party, at the Disclosing Party's expense, in challenging the disclosure;

1.1.6 "**Effective Date**" shall mean September 19th, 2011;

1.1.7 "**Entity**" means a corporation, an association, a joint venture, a partnership, a trust, a business, a Governmental Body, or any organization which can exercise independent legal standing;

1.1.8 " **Field of Use**" shall mean treatment of cancer;

1.1.9 "**First Commercial Sale**" means the date that the Products are first marketed or publicly made available for which consideration is received;

1.1.10 "**Governmental Body**" shall mean (i) any domestic or foreign national, federal, provincial, state, municipal or other government or body; (ii) any international or multilateral body; (iii) any subdivision, ministry, department, secretariat, bureau, agency, commission, board, instrumentality or authority of any of the foregoing governments or bodies; (iv) any quasi-governmental or private body exercising any regulatory, expropriation or taxing authority under or on behalf of any of the foregoing

governments or bodies; or (v) any domestic, foreign, international, multilateral or multinational judicial, quasi-judicial, arbitration or administrative court, grand jury, tribunal, commission, board or panel;

1.1.11 "**Gross Sales**" means all sales, revenues, receipts, and monies, and considerations, collected or received by Licensee and/or Sublicensee from the sale, lease, or other transfer of Products, whether such is received in cash or by way of other benefit, advantage, or concession;

1.1.12 "**Liability**" or "**Liabilities**" shall mean losses, damages, fines, costs, liabilities and expenses (including but not limited to the reasonable fees, costs and expenses of attorneys and other professional and court costs), based on any civil, criminal, statutory or regulatory claims of liability;

1.1.13 "**Materials**" means Original Material, Progeny and Unmodified Derivatives.

1.1.14 "**Material Transfer Agreement**" or "**MTA**" shall mean the agreement between the CHUM and the University of Miami attached hereto as Schedule 1.0.

1.1.15 "**Minimum Annual Royalty**" shall have the meaning ascribed thereto in section 3.3 herein;

1.1.16 "**Modifications**" means substances created by Licensee which contain/incorporate the Materials;

1.1.17 "**Net Sales**" shall mean Gross Sales less the following: (i) trade, cash, quantity and promotional discounts which effectively reduce the net selling price; (ii) excise, sales, value added or other taxes imposed upon and paid with respect to such sales (excluding taxes based upon income); and (iii) amounts repaid or credited by reason of rejections, defects, recalls or returns or retroactive price reductions, all as consistent with customary industry practice;

1.1.18 "**Original Material**" means the cell lines developed by Dr. Anne-Marie Mes-Masson and Dr. Diane Provencher described in Schedule 2.0.

1.1.19 "**Party**" or "**Parties**" shall mean any of the Licensor or Licensee, and when used in the plural, shall mean Licensor and Licensee;

1.1.20 "**Person(s)**" shall mean an individual, partnership, corporation, business, trust, joint venture or other entity of a similar nature;

1.1.21 "**Products**" shall mean a cancer vaccine resulting from the Study or use of the Materials;

1.1.22 "**Progeny**" shall mean unmodified descendant from the Original Material, such as virus from virus, cell from cell, or organism from organism;

1.1.23 "**Royalties**" shall have the meaning ascribed thereto in section 3.2.1;

1.1.24 "**Royalty Period**" shall mean each of the Calendar Year from the Effective Date of this Agreement;

1.1.25 "**Study**" shall mean the research protocol described in Schedule 3.0.

1.1.26 "**Term**" shall have the meaning ascribed thereto in section 10.1;

1.1.27 "**Territory**" shall mean all the countries of the world; and

1.1.28 "**Unmodified Derivatives**" shall mean substances created by the Licensee which constitute an unmodified functional subunit or product expressed by the Original Material. Some examples include: subclones of unmodified cell lines, purified or fractionated subsets of the Original Material, proteins expressed by DNA/RNA of Original Material or Modifications, or monoclonal antibodies secreted by a hybridoma cell line.

1.2 Schedules

1.2.1 The schedules attached to this Agreement are incorporated into this Agreement by reference and are deemed to be part hereof.

Schedule no.	Description
1.0	Original Material Description
2.0	Material Transfer Agreement
3.0	Study Description

1.3 Interpretation Not Affected by Headings of Party Drafting

1.3.1 The division of this Agreement into articles, sections, subsections and clauses and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement. The terms "this License Agreement", "this Agreement", "hereof", "herein", "hereunder" and similar expressions refer to this Agreement and the schedules hereto and not to any particular article, section, subsection, clause or other portion hereof and include any agreement or instrument supplementary or ancillary hereto.

1.4 Number and Gender

1.4.1 In this Agreement, unless there is something in the subject-matter or context inconsistent therewith, (i) words in the singular number include the plural and such words shall be construed as if the plural had been used where the context so requires, (ii) words in the plural include the singular and such words shall be construed as if the singular had been used where the context so requires, and (iii) words importing the use of any gender shall include all genders where the context or Party referred to so requires, and the rest of the sentence shall be construed as if the necessary grammatical and terminological changes had been made.

1.5 Accounting Principles

1.5.1 Wherever in this Agreement reference is made to a calculation to be made or an action to be taken in accordance with generally accepted accounting principles, such reference will be deemed to be to the generally accepted United States accounting principles ("GAAP"), from time to time approved by the Canadian Institute of Chartered Accountants, or any successor body, applicable as of the date on which such calculation or action is made or taken or required to be made or taken in accordance with generally accepted accounting principles.

1.6 Time of Essence

1.6.1 Time shall be of the essence hereof.

2. GRANTS

2.1 Exclusive Commercial Use Rights

2.1.1 Subject to the terms and conditions of this Agreement, Licensor hereby grants to Licensee an exclusive license limited to the Field of Use to use, study, store, culture, handle, modify and characterize the Materials in order to make, use, develop, manufacture, distribute, export, import, commercialize, market, sell, or otherwise commercially exploit Products within the Territory, and have made, used, developed, manufactured, distributed, commercialized, marketed, sold, leased or otherwise commercially exploit Products in the Territory. The Licensee may grant sublicenses on any of the rights granted under this Agreement.

2.1.2 The license rights granted pursuant to subsection 2.1.1 shall extend to Affiliate(s) of Licensee subject to the same terms and conditions hereof, provided such Affiliate(s) agrees in writing, with copy to Licensor, as if it were party to this Agreement, in which case, Licensee and Affiliate(s) shall be jointly and solidarily responsible for obligations under this Agreement.

2.1.3 Except for Products, Licensee agrees not to sell, transfer or otherwise provide the Materials to any third party for any use without the written consent of the Licensor.

2.1.4 The Agreement does not preclude Licensor nor CHUM from distributing the Materials to third parties solely for non-commercial research or academic purposes within the Field of Use so long as such third parties enter into a material transfer agreement with CHUM that restricts such third parties from further transferring the Materials to other parties for commercial purposes.

2.1.5 For avoidance of doubt, the exclusivity stipulated in subsection 2.1.1 refers to an undertaking by CHUM and Licensor not to expressly grant any commercial rights on the Materials in the Field of Use to a third party.

2.2 Strategic Competitive Advantage

2.2.1 Licensee acknowledges and agrees that the license granted under the present Agreement constitutes a strategic competitive advantage for Licensee and that all the financial considerations provided for in this Agreement, namely at Article 3, shall prevail.

2.3 Right to Sublicense

2.3.1 The license rights granted under this Agreement shall also specifically include the right for Licensee to grant Sublicenses without any requirement to obtain prior consent of Licensors, provided Licensee is not in material breach of this Agreement. Licensee agrees that any Sublicense shall be granted under the following conditions:

2.3.1.1 Sublicense rights shall be granted only to those third parties that can reasonably demonstrate a strong capability and specific plans for the effective development and marketing of the Products as reasonably determined by Licensee in its sole discretion; and

2.3.1.2 Within thirty (30) days after execution of a Sublicense agreement, as authorized herein, Licensee shall forward to Licensors a copy of the executed Sublicense agreement, and if such Sublicense agreement is written in a language other than French or English, Licensee shall provide Licensors with an English translation of the Sublicense agreement in accordance with Article 1.7; and

2.3.1.3 Any Sublicense granted by Licensee shall impose obligations, responsibilities and standards upon any Sublicensee that, in all material respects, are no less than those imposed on Licensee hereunder including but not limited to royalties to be paid to the Licensee in respect of sales of Products and provision of Services by Sublicensee. Each Sublicense shall specifically make reference to this Agreement and all rights retained by Licensors or required to be granted back to Licensors from Licensee or the Sublicensee; and

2.3.1.4 Each Sublicense agreement shall include a provision stating that the Sublicense agreement shall automatically be modified or terminated, in whole or in part, upon any modification or termination, in whole or in part, of this Agreement. Such modification or termination of the Sublicense agreement shall be consistent with and reflect the modifications or termination of this Agreement. Copies of amendments or modifications to a Sublicense agreement shall be provided to Licensors in accordance with the provisions herein; and

2.3.1.5 Should a Sublicense agreement concluded by Licensee contain material obligations substantially different than those imposed on the Licensee by Licensors in this Agreement, Licensee shall be required to obtain Licensors' written consent with respect to the content of such Sublicense Agreement,

which consent shall not be unreasonably withheld, prior to the grant of Sublicenses of Licensee's rights under this Agreement.

2.3.2 Licensee shall be solely responsible for the enforcement of the terms of any Sublicense, for collection of payment amounts due thereunder and for inspecting the accounts and records kept by the Sublicensee to ascertain its Net Sales

2.3.3 No Sublicense agreement shall relieve Licensee of any of its obligations under this Agreement, including the obligation to pay Licensors Royalties or any other amounts due pursuant to the terms and conditions of this Agreement.

2.4 Transfer of Materials from the University of Miami to Licensee

2.4.1 The Licensor and the CHUM agree to the transfer of Materials, whether modified or not, from the University of Miami to the Licensee for the purposes described in this Agreement and the MTA under the condition that the License Initiation Notice and the Initial License Fee has been received by the Licensee.

2.5 Rights Reserved

2.5.1 Notwithstanding the exclusive commercial use rights granted herein, the CHUM and its researchers specifically reserve the unlimited and royalty free right to use the Materials for their own academic and non-commercial purposes only, including teaching, research and continuing research, development testing and all other non-commercial practice.

2.6 No Further Grant

2.6.1 This Agreement shall not be interpreted or construed as granting to Licensee any rights, express or implied, by estoppel or otherwise, to any patents, patent applications, inventions, methods, technical information, confidential information, proprietary information, expertise, know-how, trade secrets, or knowledge not specifically licensed under this Agreement; and all rights not expressly granted to Licensee by this Agreement are expressly reserved by Licensor. The words used in this Article are intended to have their broadest possible meanings, and are not to be limited by the definitions set forth.

2.7 Assignment

2.7.1 Licensee shall not have the right to assign this Agreement without obtaining the prior written consent of Licensor. However, Licensee may, after giving at least 30 days notice to Licensor, assign this Agreement to a corporate successor of Licensee or to a person or entity acquiring all or substantially all rights relating to a Product without the consent of the Licensee.

3. LICENSING CONSIDERATIONS

3.1 Initial License Fee

3.1.1 Upon completion of research described in the MTA, if the Licensee remains interested in developing Products, Licensee shall give a written notice of such interest to Licensor ("**License Initiation Notice**") and pay to Licensor a non-refundable, non-creditable license issue fee of five thousand Canadian dollars ($CDN5,000.00) ("**Initial License Fee**"). The License Initiation Notice shall be received by Licensor within two (2) months of the termination of the MTA. Failure to communicate such notice within this timeframe shall immediately terminate the present Agreement.

3.2 Earned Royalties

3.2.1 In consideration of the license granted in this Agreement, Licensee shall pay to Licensor a non-refundable earned royalty of [XXXX]of Net Sales made by Licensee and/or a Sublicensee ("**Royalties**").

3.3 Minimum Annual Royalty

3.3.1 In order to maintain the license herein granted, within sixty (60) days of each of the one year anniversaries of this Agreement, Licensee shall pay to Licensor a non-refundable minimal annual royalty of [XXXX] ("**Minimal Annual Royalty**"). The Minimal Annual Royalty shall be fully creditable against Royalties and Milestone Payments (as this term is defined in subsection 4.1.4) payable to Licensor during the twelve month period for which a Minimal Annual Royalty is due.

4. PERFORMANCE AND MILESTONES

4.1 Performance

4.1.1 Upon approval by a regulatory agency such as to the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMEA) or Canada's Therapeutic Product Directorate (TPD), of an Investigational New Drug Application (or its equivalent in jurisdictions outside of the U.S.) for each Product type requiring such approval, the Licensee shall pay to Licensor [XXXX] ("**Milestone Payment 1**").

4.1.2 Upon completion of a Phase I clinical trial for each Product type requiring such clinical trial, the Licensee shall pay to Licensor [XXXX] ("**Milestone Payment 2**").

4.1.3 Upon completion of a Phase II clinical trial for each Product type requiring such clinical trial, the Licensee shall pay to Licensor [XXXX] ("**Milestone Payment 3**").

4.1.4 Upon obtaining approval to market by a regulatory agency such as to the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMEA) or Canada's Therapeutic Product Directorate (TPD) for each Product type requiring such approval in a first country, the Licensee shall pay to Licensor [XXXX] ("**Milestone Payment 4**").

4.1.5 Upon obtaining approval to market by a regulatory agency such as to the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMEA) or Canada's Therapeutic Product Directorate (TPD) for each Product type requiring such approval in a second country, the Licensee shall pay to Licensor [XXXX] ("**Milestone Payment 5**"). Collectively Milestone Payment 1, Milestone Payment 2, Milestone Payment 3, Milestones Payment 4 and Milestone Payment 5 are referred to herein as "**Milestone Payments**".

5. ACCOUNTING AND ROYALTY REPORTS

5.1 Books and Records

5.1.1 Licensee shall keep at its own expense accurate books of account and records, using accepted accounting principles, detailing all data necessary to calculate and audit any payments due to Licensor under this Agreement.

5.1.2 Upon thirty (30) days advance written notice, Licensee's records shall be open for inspection and audit by a duly authorized independent chartered accountant designated by Licensor to ascertain compliance and the accuracy payments under this Agreement. The audit may be performed once per year at any time within the year after the end of any reporting period to which the books of account pertain and shall be performed during normal business hours at Licensee's principal place of business or at such other site as may be agreed upon by Licensor and Licensee**.**

5.1.3 Information gained in such an audit and all books of account shall be treated as Confidential Information. Licensor agrees to impose a similar requirement of confidentiality on any agent appointed by Licensor to conduct the audit.

5.1.4 Licensee shall keep such books and records available for inspection by a duly authorized certified accountant acting on behalf of Licensor for a period of six (6) years following the end of the Calendar Year to which such books and records relate.

5.2 Costs

5.2.1 The audit referenced in subsection 5.1.2 shall be at the expense of Licensor. If the audit reveals that Licensee has paid less than required under this Agreement, Licensee shall promptly pay the additional amount due together with interest as required under this Agreement for late payments. If the amount of underpayment exceeds ten percent (10%) of the amount due to Licensor, Licensee shall pay the full cost of the audit. Any overpayment amount shall be credited against Royalties or the consideration set forth in Article 3 owed in the next or any following Royalty Period.

5.3 Payments & Reports

5.3.1 Each payment made to Licensor shall be accompanied by a written report summarizing, in sufficient detail to allow Licensor to verify all payment amounts and the data used to calculate the amounts paid. Each report pertaining to royalty payments for the applicable accounting period shall specifically include the following, as applicable:

5.3.1.1 Gross Sales amounts;

5.3.1.2 Net Sales amounts;

5.3.1.3 Number of Products sold and Product type (if several);

5.3.1.4 All amounts, by category, deducted from Gross Sales to derive Net Sales; and

5.3.1.5 Payable amounts broken down by category (Royalties, Minimal Annual Payments, Milestone Payments).

5.3.2 If during any Royalty Period following the First Commercial Sale, no amounts are or should be invoiced, billed, or received and no payment of any kind is or should be due to Licensor, Licensee shall nevertheless submit a written report, no later than sixty (60) days after the end of the Royalty Period, to Licensor stating that no amounts of any kind are due to Licensor.

5.3.3 Any amount due to Licensor shall accrue at the time Licensee, invoices, ships, or receives payment for such Product; whichever event occurs first. All amounts accrued for the benefit of Licensor shall be deemed held in trust for the benefit of Licensor until payment of such amounts is made pursuant to this Agreement.

5.3.4 Unless otherwise specified in this Agreement, all payment amounts due to Licensor under this Agreement shall be paid to Licensor for its benefit, deposited in a bank account designated by Licensor, within ninety (90) days following the end of the Royalty Period in which such payment accrues.

5.4 Currency

5.4.1 Licensee shall make payment of amounts due to Licensor under this Agreement in Canadian Dollars. If any payment amount due to Licensee is derived from a currency

other than Canadian dollars, said amount will be converted into Canadian dollars using the daily spot rate for that currency as quoted by the New York Federal Reserve Bank on the last business day of the Royalty Period in respect of which the Royalties are due.

5.5 Interest

5.5.1 Any amount due to Licensor under this Agreement and made to Licensor more than thirty (30) days after the delay stipulated herein for its payment shall bear interest at a yearly interest rate of three (3) point above the prime business rate of the Bank of Canada (or any successor entity), said interest to be calculated daily, starting on the 31st day after the end of said delay until payment to Licensor.

6. MODIFICATIONS

6.1.1 Licensor retains ownership of any and all Materials, including any part thereof included or incorporated within substances created by Licensee which contain/incorporate the Materials. For the avoidance of doubt, it is understood and agreed that any Modification shall be owned by Licensee provided that Licensor retains ownership of any portion of Materials contained within such Modification. Notwithstanding the above, in the event that a Modification is derived from the Materials during the Term of this Agreement, it is understood and agreed that the use of such Modification by Licensee during the Term shall not relieve Licensee of any of its obligations towards Licensor under this Agreement, including its obligations of payment as per Article 3. In other words, any use of the Modifications by Licensee during the Term shall be deemed to be included in the license granted herein.

6.1.2 The Licensee is free to file patent application(s) claiming inventions made by the Licensee through the use of the Materials but agrees to notify the Licensor upon filing a patent application claiming Modifications or method(s) of manufacture or use(s) of the Materials.

7. CLAIMS AGAINST THIRD PARTIES

7.1.1 Nothing in this Agreement shall be construed as obliging Licensor or Licensee or its Affiliates to institute, prosecute or take legal actions or any other proceeding against a third party.

7.1.2 Nothing in this Agreement shall be construed as obliging Licensor to monitor, audit or be informed of any utilization of the Materials by third parties, whether or not the Materials were obtained directly through the CHUM or the ATCC.

8. REPRESENTATIONS, WARRANTIES AND COVENANTS

8.1 Mutual Representations and Warranties

Licensor hereby represents to Licensee, and Licensee hereby represents and warrants to Licensor, that (a) it has full power and authority to enter into and perform its obligations pursuant to this Agreement; (b) the person signing this Agreement on its behalf has the authority to do so and to bind that Party to the terms of this Agreement; (c) its entering

into this Agreement and the transactions contemplated herein do not violate, breach or constitute a default under any of its contractual obligations relevant to this Agreement.

8.1.1 **Ownership of the Materials** The Licensor hereby represents and warrants to Licensee that it is in rightful owner by assignment or otherwise of the intellectual property rights related to the Materials free and clear of all liens, encumbrances and security interests except the rights of the ATCC. CHUM hereby represents and warrants to Licensee that it is the rightful owner by assignment or otherwise of the tangible property rights related to the Materials free and clear of all liens, encumbrances and security interests except the rights of the patients (or their successors as the case may be) from which the Material originates. Licensor and CHUM each represent and warrant to Licensee that they do not own or control any patent rights that claim the Original Materials or use of the Materials to make a Product within the Field of Use at the Effective Date.

8.1.2 Neither Licensor nor CHUM make any warranties or representations, express or implied, whether or not the exercise of the rights granted under this Agreement will result in the infringement of any rights held by third parties. Licensee acknowledges that it has been advised by Licensor and CHUM to undertake its own due diligence with respect to the Materials.

8.1.3 Licensor and CHUM hereby declare to Licensee, each for itself, that, to the best of their knowledge, without having conducted any due diligence review, they are not aware of any information or fact to the effect that the Original Material infringe any rights of any third party, nor that such a claim is pending or that such a claim has been threatened or asserted.

8.1.4 **Rights of Third Parties** Licensor and CHUM hereby represent, each for itself to Licensee that, to their knowledge, aside from this Agreement, they have not entered, concurrent with this Agreement, into any other commercial use license agreement with any other third party with regard to the Original Material, and that so long as this Agreement is in effect, subject to the provisions contained herein, they shall not enter into any other commercial use license agreement with a third party with regard to the Materials within the Field of Use.

8.1.5 **No Warranty on Materials** Any Materials accessed by Licensee pursuant to this Agreement is understood to be experimental in nature and may have hazardous properties. UNLESS OTHERWISE EXPRESSLY STATED HEREIN, NO REPRESENTATIONS ARE MADE AND NO WARRANTIES, EXPRESS OR IMPLIED, ARE OFFERED BY LICENSOR OR CHUM AS TO THE MATERIALS, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE OF THE MATERIALS PROVIDED TO LICENSEE UNDER THIS AGREEMENT. LICENSEE ACCEPTS MATERIALS "AS IS", AND THE ENTIRE RISK AS TO THE USE, MANIPULATION, RESEARCH RESULTS AND PERFORMANCE OF THE MATERIALS IS ASSUMED BY LICENSEE.

9. CONFIDENTIALITY

9.1 Confidential Information

9.1.1 The Parties may be required to disclose one to the other Confidential Information. In the protection of the confidentiality of such information, each Party shall use at least the same degree of care as it customarily uses to protect its own Confidential Information of like kind. The Parties agree to take reasonable actions and precautions to prevent the unauthorised use and disclosure of, and keep confidential, all such Confidential Information. In the interest of promoting open discussions between the Parties, it is recognized that oral Confidential Information will be communicated. To the extent possible, the Disclosing Party shall provide the Recipient with a written summary of such oral Confidential Information within thirty (30) days of such disclosure. It is understood, however, that failure of either Party to reduce said oral Confidential Information to writing shall, in no way, alter the confidentiality obligations of the Recipient under this Agreement. The Parties agree that the specific terms and conditions of this Agreement shall be considered Confidential Information unless otherwise required by law or ordered by a Court of law**.**

9.2 Use of Names and Publicity

9.2.1 Except as otherwise required by law, Licensor and Licensee shall not issue a press release or make any other public disclosure with regard to the existence of this Agreement or the terms thereof without the prior written approval of the other Party to such press release or public disclosure. Licensor and Licensee each agree that they shall submit any such press release or public disclosure to the other Party, and the receiving Party shall expeditiously review and approve any such press release or public disclosure, which approval shall not be unreasonably withheld. If the receiving Party does not respond within thirty (30) days of receipt of such submission, the press release or public disclosure shall be deemed to have been approved. Notwithstanding the above, Licensee agree to the disclosure of the existence of this Agreement in Licensor's activity reports made available to the public through the website and printed materials.

9.2.2 In the event a public disclosure is required by law, including without limitation in a filing with any securities and exchange commission, the disclosing Party shall use commercially reasonable efforts to secure confidential treatment of any Confidential Information of the other Party contained in such release (whether through protective orders or otherwise), prior to its disclosure. Licensor and Licensee, may disclose the terms of this Agreement to their actual or prospective investors or corporate partners and to their accountants, lawyers and other professional advisors provided that nothing in this section 9.2 shall permit Licensor or Licensee, to release any information which is subject to an obligation of confidentiality pursuant to this Agreement or to jeopardize the tra de secrets of the other Party.

10. TERM AND TERMINATION

10.1 Term of Agreement

10.1.1 The term of this Agreement (the "**Term**") shall commence on its Effective Date and shall continue in perpetuity, unless sooner terminated as provided hereunder.

10.2 Failure to give License Initiation Notice

10.2.1 The failure by Licensee to give the License Initiation Notice to Licensor within two (2) months of the termination of the MTA will automatically and immediately terminate this Agreement without Licensor having to give any notice to Licensee.

10.3 Right to Termination

10.3.1 Upon any material breach of or default under this Agreement by Licensee, which is not cured by Licensee pursuant to the provisions of subsection 10.3.2, Licensor may terminate this Agreement upon giving Licensee a formal written notice of termination.

10.3.2 Licensor shall give Licensee written notice of termination (the "**Licensor' Notice**") prior to terminating this Agreement. The Licensor's Notice shall state the cause(s) for termination and the reasonable procedures if any, Licensee must follow to prevent such termination. Licensee shall have thirty (30) days after the effective date of the Licensor's Notice to remedy the stated cause(s) for termination, according to the procedures stated, otherwise this Agreement and all rights granted to Licensee, shall automatically terminate at the end of the thirtieth (30^{th}) day. Should Licensor elect not to terminate this Agreement, Licensor may, at its discretion, renegotiate the terms and conditions of this Agreement with Licensee.

10.3.3 Licensor may terminate this Agreement immediately by giving written notice to Licensee if Licensee or any agent acting for Licensee falsifies any report that is due to Licensor pursuant to this Agreement.

10.3.4 Termination on Business Failure. In the event Licensee ceases conducting business in a normal course, becomes insolvent, makes a general assignment for the benefit of creditors, suffers or permits the appointment of a receiver for its business or assets, or avails itself of, or becomes subject to, any proceeding under the federal *Bankruptcy and Insolvency Act* or any other statute of any province, state or country relating to insolvency or the protection of creditor rights, this Agreement shall automatically terminate at the occurrence of any such event.

10.3.5 Force Majeure. Any delays in or failure of performance by either Party under this Agreement will not be considered a breach of this Agreement if and to the extent that such delay or failure is caused by occurrences beyond the reasonable control of that Party including, but not limited to, acts of god; acts, regulations and laws of any government; strikes or other concerted acts of workers; fire; floods; explosions; riots; wars; rebellion; and sabotage; and any time for performance hereunder will be extended by the actual time of delay caused by any such occurrence.

10.3.6 Licensee may terminate this Agreement at any time for any reason upon giving thirty (30) days advance written notice to Licensor and CHUM.

10.4 Effect of Termination

10.4.1 Termination of this Agreement shall not release Licensee or Licensor from any obligation or liability to the other, which shall have matured prior to termination, nor shall termination rescind or require repayment of any payment or consideration made or given by either Party, except as otherwise provided herein. If the terms of this Agreement expressly state that a right or obligation shall survive termination of this Agreement, such right or obligation shall survive termination to the degree necessary to allow complete fulfillment or discharge of the right or obligation. The following rights and obligations outlined in Articles and sections 1, 3 (for payments outstanding), 4 (for payments outstanding), 5 (for payments outstanding), 6, 7, 8, 9, 10, 11 and 12 shall survive termination of this Agreement.

10.4.2 Should this Agreement be terminated for any reason, Licensee shall cease all use of the Materials and destroy or return all Materials to the CHUM, at Licensor's choice and according to instructions provided by Licensor.

11. INDEMNIFICATION AND LIMITATIONS OF LIABILITY

11.1 Limitations of liability

11.1.1 Licensor and CHUM shall not incur any Liability resulting from this Agreement except for Liabilities caused by its breach of this Agreement. In all cases neither Party shall incur any indirect, incidental, special, or consequential Liabilities of any kind, including without limitation, lost business, lost savings, lost data, and lost profits, regardless of the cause and whether arising in contract (including fundamental breach), tort (including negligence), or otherwise, even if advised of the possibility of such Liabilities, in respect of its rights and duties under this Agreement. For better clarity, to the extent permitted by law and except when caused by the gross negligence or intentional misconduct of Licensor or CHUM, Licensee shall assume all liability for damages which may arise from its use, storage or disposal of the Materials, and CHUM and Licensor will not be liable to the Licensee for any loss, claim or demand made by the Licensee, or made against the Licensee by any other party, due to or arising from the use of the Materials, whether modified or not, by the Licensee.

11.2 Indemnification and Insurance

11.2.1 Licensee hereby indemnifies, defends and holds harmless Licensor and the CHUM, its limited and general partners and its directors, officers, employees, faculty, students and agents from and against any and all claims and Liabilities arising under this Agreement (except those claims and Liabilities caused by the gross negligence or intentional misconduct of Licensor or CHUM) by Licensee or any other third party howsoever the same may arise provided that: (i) Licensor promptly notify Licensee in writing of any claim or suit or material threat thereof brought against Licensor in respect of which indemnification may be sought and, to the extent allowed by law, shall reasonably

cooperate with Licensee, at the latter's costs, in defending or settling any such claim or suit; and (ii) Licensee has sole control of the defence and all related settlement negotiations.

11.2.2 Licensee shall secure and maintain comprehensive general liability insurance including product liability, contractual liability, personal injury, and insurance against claims regarding the development, delivery, storage and handling and use of Products under this Agreement, in such amounts as it customarily maintains for similar products and activities in accordance with prudent insurance practice, but in no event less than $1,000,000 per person and $3,000,000 in the aggregate per year. Licensee shall use commercially reasonable efforts following the First Commercial Sale of a Product in at least one of the countries in the Territory and at intervals thereafter in accordance with Good Industry Practice, to increase this coverage to ten (10) millions dollars in the aggregate per year if this is achievable by Licensee. Failure to maintain such insurance coverage shall be considered a material breach of this Agreement and Licensor shall have the right to terminate the Agreement in accordance with section 10.2. Licensee shall on request furnish Licensor with certificates of insurance demonstrating compliance with its obligations pursuant to this subsection 11.2.2.

12. GENERAL PROVISIONS

12.1 Assignment

As specified in section 2.6 for Licensee, neither this Agreement nor any interest or rights hereunder shall be assignable, nor be given as a security interest or otherwise transferable by any of the Parties without the prior written consent of the other Party.

12.2 Disputes

The Parties hereto shall use reasonable efforts to settle amicably any dispute, controversy and claims arising out of this Agreement. Disputes, controversies and claims which cannot be settled through good faith negotiations, shall be submitted, when permitted by law, first to mediation by a mediator whose expertise appears relevant to the matter in question. Such mediator shall be chosen jointly by the parties involved and the mediator costs shall be shared equally by the Parties to this Agreement. If after ninety (90) days, the dispute or controversy has not been resolved by mediation or if no mediator can be agreed upon by the parties, such dispute or controversy shall be exclusively resolved in the courts of Montreal, Quebec, Canada.

12.3 Successors and Assigns

Subject to Article 12 hereof, the terms and provisions of this Agreement shall inure to the benefit of, and be binding upon, Licensee, Licensor and their respective successors and permitted assigns.

12.4 Independence of Parties

Licensor and Licensee are independent entities engaged in independent businesses, and neither Party nor any agent or employee of either Party shall be regarded as an agent or employee of the other. Nothing herein shall be construed as reserving to either Party the right to control the other in the conduct of its employees or business, nor shall either Party have the authority to make any promise guarantee, warranty or representation which will create any obligation or liability whatsoever, whether express or implied, on behalf of the other. Licensor and Licensee are not joint venturers or partners.

12.5 Entire Agreement

This Agreement constitutes the entire agreement and understanding between Licensor and Licensee with respect to the Materials and any modification of this Agreement shall be in writing and shall be signed by a duly authorised representative of both Licensor and Licensee. This Agreement supersedes all prior written agreements and any and all representations which may have been made prior to this Agreement with respect to the subject matter of this Agreement.

12.6 Further Assurances

Each of the Parties hereby agrees to duly execute and deliver, or cause to be duly executed and delivered, such further instruments and to do and cause to be done such further acts and things, which may be necessary or as the Parties may at any time reasonably request in connection with this Agreement or to carry out more effectively the provisions or purposes of, or to better assure and confirm unto the Parties their rights and remedies under, this Agreement

12.7 Governing law

This Agreement and all rights and obligations hereunder, including matters of construction, validity and performance, shall be exclusively governed by and construed in accordance with the laws of the Province of Quebec and applicable Canadian laws.

12.8 Severability of Clauses

If any provision of this Agreement is determined to be illegal, against public order, or otherwise unenforceable it shall not in any way defeat, invalidate or render unenforceable any other provision of this Agreement and each such provision shall at all times be considered separate and severable in this Agreement.

12.9 Waiver

No waiver by either of the Parties of any breach of any provision hereof shall constitute a waiver of any other breach of any provision hereof.

12.10 Notices

Any notice, request, claim, demand, communication required by this Agreement shall specifically reference this Agreement, shall be in writing and may either be delivered in hand, by facsimile during normal business hours with confirmation of receipt, by reputable courier service or be mailed with postage prepaid by certified or registered mail, return receipt requested, to the addresses set forth below, or such other address for itself as any of the Parties may from time to time specify in writing to the other Party in accordance with this article. Notice shall be deemed to have been given, in the case of delivery by hand or by reputable courier service, upon receipt, in the case of delivery by certified or registered mail, five (5) working days after posting and in the case of facsimile, on confirmation of receipt. For the purposes of this section 12.10, a "working day" will be a day on which businesses are generally open for business in Canada excluding Saturdays, Sundays and all bank and public (both provincial and national) holidays.

If to Licensor: **VAL-CHUM, Limited Partnership**
3535 chemin Queen-Mary., Suite 220,
Montreal, Quebec, H3V 1H8
Attention of: President and Managing Director
Facsimile number: 1(514) 340-3204

If to Licensee: **HEAT BIOLOGICS INC.**
15 TW Alexander Drive, Suite 119
Research Triangle Park, NC 27709

Attention of: Mr. Jeff Wolf
CEO

Facsimile number: 305-503-8566

If to CHUM: **CENTRE HOSPITALIER DE L'UNIVERSITÉ DE MONTRÉAL**
3840 St-Urbain Street,
Montreal, Quebec, Canada H2W 1T8

Attention of: Jacques Turgeon,
Director of research

Facsimile number: 1-514-412-7186

12.11 Execution in Counterparts

This Agreement may be executed in counterparts, each of which, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument.

12.12 Compliance with Law

Each Party hereto shall comply with all applicable statutes, ordinances, rules, regulations, permits and orders imposed by any governmental authority on any activity of either Party hereunder.

12.13 Exclusion of third party rights

This Agreement does not create any legal rights, benefits or causes of action for any Party other than Licensor and Licensee.

[The remainder of this page was intentionally left blank.

Signatures are on the following pages]

SIGNATURES

IN CONSIDERATION THEREOF, the Parties have signed this Agreement at the Effective Date.

(Licensor) **VAL-CHUM, LIMITED PARTNERSHIP** , acting through its general partner **Gestion Univalor, limited partnership**, itself acting through its general partner **Univalor inc.**

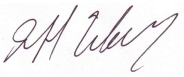
Place of signature:_____

Per: _____

Philippe Calais

President and General Manager

(Licensee) **HEAT BIOLOGICS INC.**

Per: 

Place of signature: Durham, NC

Jeff Wolf

CEO

INTERVENTION

The undersigned acknowledges and confirms having read this License Agreement, and declares that it is satisfied with the rights and obligations set forth therein and that it will respect same insofar as they apply to the undersigned.

CENTRE HOSPITALIER DE L'UNIVERSITÉ DE MONTRÉAL

Place of signature:_____ Per: _____

Sylvain Villiard, General Manager Associate

Place of signature:_____ Per: _____

Jacques Turgeon, Director of Research

SCHEDULE "1.0"

MATERIAL TRANSFER AGREEMENT

[This Schedule contains ____ pages, including this one]

[The remainder of this page is left blank on purpose]

SCHEDULE "2.0"
Material description

[This Schedule contains 2 pages, including this one]

ITEM 1:

Designation:	Cell line TOV1946
Source:	Homo sapiens (human) Female, 75 years Organ: ovary Tumor Stage: grade 3, stage IIIC Disease: papillary serous adenocarcinoma
Isolation:	February, 2004
Mutations:	p53, Exon 8

ITEM 2:

Designation:	Cell line TOV2835EP
Source:	Homo sapiens (human) Female, 67 years Organ: ovary Tumor Stage: grade 3-4, stage III Disease: papillary serous adenocarcinoma
Isolation:	April, 2006
Mutations:	p53, Exon 8

ITEM 3:

Designation:	Cell line TOV3041G
Source:	Homo sapiens (human) Female, 61 years Organ: ovary Tumor Stage: grade 3, stage IV Disease: serous adenocarcinoma
Isolation:	September, 2006
Mutations:	Not yet characterized

ITEM 4:

Designation:	Cell line TOV-2223G

Source:	Homo sapiens (human) Female, 89 years Organ: ovary Tumor Stage: grade 3, stage IIIC Disease: papillary serous adenocarcinoma
Isolation:	October, 2004
Mutations:	p53, Exon 4 (not detected with Abs)

ITEM 5:

Designation:	Cell line TOV-1369TR
Source:	Homo sapiens (human) Female, 58 years Organ: ovary Tumor Stage: grade 3-4, stage IIIC Disease: papillary serous adenocarcinoma
Isolation:	February 2003
Mutations:	p53, Exon 7

[The remainder of this page is left blank on purpose]

SCHEDULE "3.0"
DESCRIPTION OF STUDY

[This Schedule contains 1 page, including this one]

The Original Material will be transfected with a vector to cause the cells to secrete a modified form of heat shock protein gp96. Such modified cell lines will be evaluated for suitability for use in an anti-cancer vaccine. Where suitable, the Material or a Modification will be used to develop the vaccine.

[The remainder of this page is left blank on purpose]

EXHIBIT 10.23

1st LEASE MODIFICATION AGREEMENT

This 1st Lease Modification Agreement made and entered into as of December 19, 2012, by and between EUROPA CENTER, LLC, herein represented by its duly authorized agent, AVISON YOUNG (formerly Thomas Linderman Graham Inc.), 100 Europa Dr., Suite 190, Chapel Hill, NC 27517, hereinafter, "Landlord" and Heat Biologics, Inc. hereinafter, "Tenant".

Whereas Tenant and Landlord entered into that certain Lease dated November 18, 2011 for Suite 420 in the Europa Center office building, and;

Whereas Tenant has requested certain modifications to the Lease, and Landlord has agreed to those modifications on the terms and conditions stated below, the parties hereto do mutually agree and covenant as follows:

1. Tenant hereby requests and Landlord agrees to modify its Option to Renew from 1 year to 6 months beginning February 1, 2013. Tenant hereby acknowledges that no additional options remain and tenancy will expire July 31, 2013.

2. COURTESY NOTIFIICATION for LEASE EXTENSION: Provided the Tenant is not in default of any terms of this lease, at least 90 days from expiration of its current lease, landlord will disclose as a "courtesy notification", any interest in tenant's suite from a 3rd party. If tenant's suite becomes unavailable, management will make every effort to secure a new location withing the property at a mutually acceptable rental rate.

3. The square footage of the leased premises remain at 2,111 rentable square feet.

4. The annual base rent is hereby increased from $36,442.00 to $38,553.00 beginning February 1, 2013 through the extension period ending on July 31, 2013. The monthly base rent is hereby increased from $3,870.17 to $4,046.08 beginning February 1, 2013 through July 31, 2013.

5. Operating Expense Adjustment remains unchanged with a "Base Year" of 2012.

6. These changes are to be effective as of February 1, 2013.

7. BROKERAGE: The Tenant and Landlord each represents to the other that it has dealt directly with and only with Triangle Commercial, Inc. d/b/a Cresa Raleigh as agent for the Tenant and Avison Young for the landlord and that no other broker procured this Lease or is entitled to any commission in connection with the Lease except for these brokers.

8. All other terms and conditions of said lease, to the extent not expressly modified hereby, shall remain unchanged and in full force and effect.

JPG	JW
Landlord Initials	Tenant Initials

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this lease modification as of the day and year first written above.

Landlord:
Europa Center, LLC herein represented by its duly authorized agent, AVISON YOUNG (formerly Thomas Linderman Graham Inc.), 100 Europa Drive., Suite 190, Chapel Hill, NC 27517

Attest:

/s/ Kristian L. Bryant

By: /s/ John P. Graham (SEAL)
John P. Graham, Director of Operations

Tenant:
Heat Biologics, Inc.

Attest:

/s/ Illegible

By: /s/ Jeffrey Wolf (SEAL)
Jeff Wolf, CEO

1st LEASE MODIFICATION SUMMARY

TYPE OF LEASE: ☐ **New** ☐ **Renewal** ☑ **Expansion** ☐ **Option**

BUSINESS NAME: Heat Biologics

TENANT: Heat Biologics, Inc.

CONTACT: Jeff Wolf, CEO – Jennifer Kelly
(o) 919-240-7133
(e-mail) jwolf@heatbio.com

PROPERTY ADDRESS: Europa Center – Suite 420
100 Europa Dr., Chapel Hill, NC 27517

LANDLORD: EUROPA CENTER, LLC.

NOTICE ADDRESS: AVISON YOUNG (formerly Thomas Linderman Graham Inc.)
100 Europa Dr. – Suite 190, Chapel Hill, NC 27517

RENT PAYMENTS: Europa Center, LLC, c/o AVISON YOUNG
(formerly Thomas Linderman Graham Inc.)
P.O. Box 900002, Raleigh, NC 27675-9000

DATE SIGNED: December 19, 2012

RENTABLE SQ. FTG: 2,111

LEASE TERM: six (6) months

SECURITY DEPOSIT: On file.

COMMENCES: February 1, 2013

LEASE EXPIRES: July 31, 2013

RENT COMMENCES: February 1, 2013

RENT PSF: $23.00

MONTHLY BASE RENT: $4,046.08

ANNUAL BASE RENT: $48,553.00

OPERATING EXPENSE BASE YEAR: remains at 2012

PRORATION: Calculation of Rents is based on the annual rent amount divided by a 365 day year.

ALL RENTS ARE DUE ON THE 1ST DAY OF EACH MONTH Any payment not received by the 5th of the month will incur an automatic late fee of Five (5%) percent.

JPG
Landlord Initials

JW
Tenant Initials