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

FORM S-8 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) **26-2844103** (I.R.S. Employer Identification Number)

627 Davis Drive, Suite 400 Morrisville, North Carolina 27560 (919) 240-7133

(Address, including ZIP code, and telephone number, including area code, of registrant's principal executive office)

HEAT BIOLOGICS, INC. 2018 STOCK INCENTIVE PLAN

(Full title of the Plan)

Jeffrey Wolf Chief Executive Officer and Chairman of the Board of Directors Heat Biologics, Inc. 627 Davis Drive, Suite 400 Morrisville, North Carolina 27560 (919) 240-7133 (Name, address and telephone number of agent of services)

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with copies to:

Leslie Marlow, Esq. Hank Gracin, Esq Patrick J. Egan, Esq. Gracin & Marlow, LLP The Chrysler Building 405 Lexington Avenue, 26th Floor New York, New York 10174 (212) 907-6457 (Name, address and telephone number)

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

Large accelerated filer \square Non-accelerated filer \blacksquare Accelerated filer □ Smaller reporting company ☑ Emerging growth company □

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)(2)	Proposed Maximum Offering Price Per Share(3)	Proposed Maximum Aggregate Offering Price(3)(4)	Amount of Registration Fee(5)
Common Stock, par value \$0.0002 per share, under the 2018 Stock Incentive Plan	15,000,000 shares	\$1.26	\$18,900,000	\$2,062

(1) The securities to be registered include options and other rights to acquire the common stock of Heat Biologics, Inc. (the "Registrant").

- (2) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or similar transaction.
- (3) Calculated pursuant to Rule 457(c) and 457(h) of the Securities Act solely for purposes of calculating the registration fee. The price for the shares under the plan is based upon the average of the high and low sale prices of the Registrant's common stock reported on the NASDAQ Capital Market on October 9, 2020.
- (4) This registration statement also covers the common stock purchase rights issuable in accordance with the rights agreement, dated as of March 11, 2018, as amended by Amendment No. 1 thereto dated March 8, 2019 and Amendment No. 2 thereto dated March 10, 2020, between the Registrant and Continental Stock Transfer & Trust Company, as Rights Agent, which are presently attached to and trade with the Registrant's common stock.

(5) Calculated under Section 6(b) of the Securities Act as 0.00010910 of the proposed maximum aggregate offering price.

EXPLANATORY NOTE

Heat Biologics, Inc. (the "Registrant" or the "Company") filed with the Securities and Exchange Commission (the "Commission") its Registration Statement on Form S-8 (Registration No. 333-227699) on October 4, 2018 (the "2018 Registration Statement") pursuant to and in accordance with the requirements of General Instruction E to Form S-8 for the purpose of registering under the Securities Act of 1933, as amended (the "Securities Act"), 4,000,000 shares of common stock, par value \$0.0002 per share (the "Common Stock"), to be offered and sold under the Registrant's 2018 Stock Incentive Plan, as it may be amended (hereinafter referred to as the "Plan"). Pursuant to General Instruction E to Form S-8, the contents of the 2018 Registration Statement are incorporated into this Registration Statement by reference.

The Registrant also filed with the Commission its Registration Statement on Form S-8 (Registration No. 333-233352) on August 16, 2019 (the "2019 Registration Statement") pursuant to and in accordance with the requirements of General Instruction E to Form S-8 for the purpose of registering under the Securities Act an additional 4,000,000 shares of Common Stock to be offered and sold under the Plan. These additional 4,000,000 shares of Common Stock were added pursuant to the adoption of Amendment No. 1 to the Plan. Pursuant to General Instruction E to Form S-8, the contents of the 2019 Registration Statement are incorporated into this Registration Statement by reference.

The Registrant also filed with the Commission its Registration Statement on Form S-8 (Registration No. 333-237137) on March 12, 2020 (the "March 2020 Registration Statement") pursuant to and in accordance with the requirements of General Instruction E to Form S-8 for the purpose of registering under the Securities Act an additional 4,000,000 shares of Common Stock to be offered and sold under the Plan. These additional 4,000,000 shares of Common Stock were added pursuant to the adoption of Amendment No. 2 to the Plan. Pursuant to General Instruction E to Form S-8, the contents of the March 2020 Registration Statement are incorporated into this Registration Statement by reference.

The Registrant is filing this Registration Statement on Form S-8 (the "Registration Statement") to register an additional 15,000,000 shares of Common Stock that were added to the Plan by a vote of the Registrant's stockholders at the Registrant's 2020 Annual Meeting of Stockholders that was held on August 21, 2020, whereby the stockholders approved Amendment No. 3 to the Plan. A mendment No. 3 to the Plan increased the number of shares of Common Stock with respect to which awards may be granted under the Plan to an aggregate of 27,000,000 shares of Common Stock.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information*

Item 2. Registrant Information and Employee Plan Annual Information*

The information specified in Item 1 and Item 2 of Part I of this Registration Statement on Form S-8 is omitted from this filing in accordance with the provisions of Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"), and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I will be delivered to the participants in the Plan as required by Rule 428. Such documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The Securities and Exchange Commission (the "Commission") allows us to "incorporate by reference" the information we file with it which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings made with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), between the date of this prospectus and the termination of the offering:

- Our Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 001-35994) filed with the SEC on March 30, 2020;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 001-35994) filed with the SEC on May 15, 2020;
- Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 (Commission File No. 001-35994) filed with the SEC on August 7, 2020;
- Our Current Reports on Form 8-K (Commission File No. 001-35994) filed with the SEC onJanuary 3, 2020, January 21, 2020, February 5, 2020, February 21, 2020, March 2, 2020, March 3, 2020, March 5, 2020, March 11, 2020, March 13, 2020, March 17, 2020, March 23, 2020, March 23, 2020, and April 10, 2020, April 23, 2020, April 28, 2020, April 29, 2020, May 14, 2020, May 29, 2020, June 1, 2020, June 8, 2020; June 22, 2020; July 27, 2020; July 29, 2020; August 24, 2020 and August 24, 2020;
- Definitive Proxy Statement on Schedule 14A filed with the SEC on July 27, 2020 and Amendment No. 1 to the Definitive Proxy Statement on Schedule 14A filed with the SEC on July 29, 2020;
- The description of our common stock set forth in our registration statement on Form 8-A filed with the SEC on July 8, 2013 (Commission File No. 001-35994); and
- The description of our common stock purchase rights set forth in our registration statement on Form 8-A filed with the SEC on<u>March 12, 2018</u>, Form 8-A/A (Amendment No. 1) filed on <u>March 13, 2019</u>, Form 8-A/A (Amendment No. 2) filed with the SEC on <u>March 13, 2020</u> (Commission File No. 001-35994).

All other reports and documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) shall be deemed to be incorporated by reference in this Registration Statement and to be a part of this Registration Statement from the respective date of filing of each of those reports or documents until the filing of a post-effective amendment to this Registration Statement which indicates either that all securities offered by this Registration Statement have been sold or which deregisters all of the securities under this Registration Statement then remaining unsold.

Any statement contained in this Registration Statement or in a document incorporated or deemed to be incorporated by reference in this Registration Statement shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in this Registration Statement or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this Registration Statement modifies or supersedes that statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel

Not applicable.

Item 6. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act.

Our amended and restated certificate of incorporation, as amended, provides for indemnification of our directors and executive officers to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws provide for indemnification of our directors and executive officers to the maximum extent permitted by the Delaware General Corporation Law.

As permitted by the Delaware General Corporation Law, the Registrant has entered into indemnity agreements with each of its directors that require the Registrant to indemnify such persons against any and all costs and expenses (including attorneys', witness or other professional fees) actually and reasonably incurred by such persons in connection with any action, suit or proceeding (including derivative actions), whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director or officer or is or was acting or serving as an officer, director, employee or agent of the Registrant or any of its affiliated enterprises, provided that such person acted in good faith and in a manner such person reasonable believed to be in or not opposed to the Registrant's best interests and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

Item 7. Exemption from Registration Claimed

Not applicable.

Exhibit No.	Description of Document
4.1	Third Amended and Restated Certificate of Incorporation (1)
4.2	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation (2)
4.3	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation (3)
4.4	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation (4)
4.5	Amended and Restated Bylaws (5)
4.6	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation (6)
5.1	Opinion of Gracin & Marlow, LLP regarding Legality of Shares (12)
23.1	Consent of BDO USA, LLP, Independent Registered Public Accounting Firm (12)
23.2	Consent of Gracin & Marlow, LLP (contained in Exhibit 5.1) (12)
24.1	Power of Attorney (included as part of the signature page to this Registration Statement and incorporated herein by reference)
	(12)
99.1	Heat Biologics, Inc. 2018 Stock Incentive Plan (7)
99.2	Amendment No. 1 to the Heat Biologics, Inc. 2018 Stock Incentive Plan (8)
99.3	Amendment No. 2 to the Heat Biologics, Inc. 2018 Stock Incentive Plan (9)
99.4	Amendment No. 3 to the Heat Biologics, Inc. 2018 Stock Incentive Plan (11)
99.5	Form of Incentive Stock Option Agreement and Notice of Exercise (7)
99.6	Form of Non-Statutory Stock Option Agreement and Notice of Exercise (7)
99.7	Form of Notice of Award of Restricted Stock Units and Restricted Stock Unit Award Agreement (7)
99.8	Form of Restricted Stock Agreement (10)
(1) Filed as E	while 2.1 and incompared by reference to the Decistrant's Decistration Statement on Form S.1 filed with the Securities and Evaluate
(I) Flied as E	xhibit 3.1 and incorporated by reference to the Registrant's Registration Statement on Form S-1 filed with the Securities and Exchange

(1) The use in the incorporated by reference to the registration statement on Form S-1 filed with the Securities and Exchange Commission on May 6, 2013 (File No. 001-35994).
(2) Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Registration Statement on Form S-1 filed with the Securities and Exchange

(3) Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on July 17, 2017 (File No. 001-35994).

- (4) Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on January 19, 2018 (File No. 001-35994).
- (5) Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on October 18, 2019 (File No. 001-35994).
- (6) Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on March 23, 2020 (File No. 001-35994).
- (7) Filed as Exhibits 4.1, 4.2, 4.3 and 4.4 and incorporated by reference to the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on October 4, 2018 (File No. 333-227699).
- (8) Filed as Exhibit 4.2 and incorporated by reference to and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on March 12, 2019 (File No. 001-35994).

(9) Filed as Exhibit 4.3 and incorporated by reference to and incorporated by reference to the Registrant's Form S-8 filed with the Securities and Exchange Commission on March 12, 2020 (File No. 333-237137).

(10) Filed as Exhibit 10.4 and incorporated by reference to the Registrant's Form 8-K filed with the Securities and Exchange Commission on January 3, 2020 (File No. 001-35994).

(11) Incorporated by reference to Appendix A to the Registrant's Amendment No. 1 to Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on July 27, 2020, 2019 (File No. 001-35994).

(12) Filed herewith

Item 9. Undertakings

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, as amended;

⁽²⁾ Filed as Exhibit 3.1 and incorporated by reference to the Registrant's Registration Statement on Form S-1 filed with the Securities and Exchange Commission on May 30, 2013 (File No. 001-35994).

ii. To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement;

iii. To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (a)(1)(i) and (a)(1)(i) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this 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 that remain unsold at the termination of the offering.

4. That, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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.

5. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant, the Registrant has been advised that in the opinion of the 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 Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant 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 Registrant 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-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Morrisville, North Carolina, on the 13th day of October, 2020.

HEAT BIOLOGICS, INC.

By: /s/ Jeffrey Wolf

Name: Jeffrey Wolf Title: Chief Executive Officer and Chairman of the Board (Principal Executive Officer)

POWER OF ATTORNEY AND SIGNATURES

Each of the undersigned, whose signature appears below, hereby constitutes and appoints Jeffrey Wolf as his true and lawful attorney-infact and agent, with full power of substitution and resubstitution for him and in his name, place and stead, in any and all capacities, to sign any or all amendments to this Registration Statement, whether pre-effective or post-effective, and to file the same with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, or his substitute, full power and authority to do and perform each and every act and thing necessary or appropriate to be done with respect to this Registration Statement or any amendments hereto in the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Jeffrey Wolf Jeffrey Wolf	Chief Executive Officer, President and Chairman (Principal Executive Officer)	October 13, 2020
/s/ William Ostrander William Ostrander	Vice President of Finance (Principal Financial Officer and Principal Accounting Officer)	October 13, 2020
/s/ John Monahan John Monahan, Ph.D.	Director	October 13, 2020
/s/ John Prendergast John Prendergast, Ph.D.	Director	October 13, 2020
/s/ Edward B. Smith, III Edward B. Smith, III	Director	October 13, 2020



The Chrysler Building 405 Lexington Avenue, 26th Floor New York, New York 10174 Telephone: (212) 907-6457 Facsimile: (212) 208-4657

October 13, 2020

The Board of Directors Heat Biologics, Inc. 627 Davis Drive, Suite 400 Morrisville, North Carolina 27560

Re: Registration Statement on Form S-8

Gentlemen:

We refer to the Registration Statement on Form S-8 (the "Registration Statement") filed on the date hereof by Heat Biologics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission with respect to the registration of up to an aggregate of 15,000,000 shares of the Company's common stock, par value \$0.0002 per share (the "Shares"), to be issued in connection with the Company's 2018 Stock Incentive Plan, as amended by Amendment No. 1 thereto, dated May 21, 2019, Amendment No. 2 thereto, dated February 27, 2020 and Amendment No. 3 thereto, dated July 22, 2020 (collectively, the "Plan").

In connection with rendering this opinion, we have examined or are familiar with the charter documents of the Company, the Plan, the corporate proceedings with respect to the authorization of the Registration Statement and the Plan, and such other certificates, instruments and documents as we have considered necessary or appropriate for purposes of this opinion. In such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, conformity to the original documents of all documents submitted to us as copies and the authenticity of the originals of such latter documents. As to any facts material to our opinion, we have, when relevant facts were not independently established, relied upon the Registration Statement and the aforesaid records, certificates and documents. We have made such examination as we have deemed necessary for the purpose of this opinion.

Based upon such examination, it is our opinion, that, the Shares have been duly and validly authorized and when issued against receipt of the consideration therefore in accordance with the provisions of the Plan and the Registration Statement, will be validly issued, fully paid and non-assessable.

We are members of the bar of the State of New York, and do not express any opinion herein concerning any law other than the Delaware General Corporation Law and applicable reported judicial decisions. This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligations to advise you of any change in the foregoing subsequent to the delivery of this opinion letter.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/s/ Gracin & Marlow, LLP

GRACIN & MARLOW, LLP

Heat Biologics, Inc. Morrisville, North Carolina

We hereby consent to the incorporation by reference in this Registration Statement of our report dated March 30, 2020, relating to the consolidated financial statements of Heat Biologics, Inc. appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ BDO USA, LLP

Raleigh, North Carolina October 13, 2020