

Prospectus Supplement
(To Prospectus dated December 22, 2020)



Up to \$4,037,193 of Shares of Common Stock

We have entered into a Sales Agreement, dated December 8, 2023 (the “sales agreement”), with A.G.P./Alliance Global Partners (“A.G.P.” or the “sales agent”) relating to the sale of shares of our common stock, par value \$0.0002 per share, having an aggregate offering price of up to \$4,037,193 from time to time through or to A.G.P., acting as sales agent or principal.

Sales of shares of our common stock, if any, under this prospectus supplement will be made in sales deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the “Securities Act”). The sales agent is not required to sell any specific amount, but will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices, on mutually agreed terms between the sales agent and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

As sales agent, A.G.P. is entitled to compensation at a fixed commission rate equal to 3.0% of the gross proceeds of each sale of shares of our common stock. In connection with the sale of our shares of common stock on our behalf, the sales agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of the sales agent will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to the sales agent with respect to certain liabilities, including liabilities under the Securities Act.

Our common stock is listed on the NYSE American under the symbol “NHWK.” On December 1, 2023, the last reported sale price of our common stock on the NYSE American was approximately \$0.38 per share.

As of the date of this prospectus supplement, the aggregate market value of our outstanding common stock held by non-affiliates is \$12,111,581, which is calculated based on 24,742,760 shares of our outstanding common stock held by non-affiliates and a price of \$0.4895 per share, the closing price of our common stock on November 7, 2023, which is the highest closing sale price of our common stock on the NYSE American within the prior 60 days of this prospectus supplement. During the prior twelve calendar month period that ends on and includes the date hereof, we have not offered or sold any shares of our common stock pursuant to General Instruction I.B.6 to Form S-3.

Investing in our common stock involves a high degree of risk. Before making an investment decision, please read the information under the heading “Risk Factors” beginning on page S-3 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

A.G.P.

The date of this prospectus supplement is December 8, 2023

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) on December 10, 2020, as amended on December 18, 2020, and was declared effective December 22, 2020. Before buying any of the shares of common stock that we are offering, we urge you to carefully read this prospectus supplement and the accompanying prospectus, together with the information incorporated by reference as described under the sections entitled “[Where You Can Find More Information](#)” and “[Incorporation of Certain Documents by Reference](#)” in this prospectus supplement. These documents contain important information that you should consider when making your investment decision.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein or therein. The second part, the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in any document incorporated by reference into this prospectus supplement that was filed with the SEC before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference into this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein or in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreement, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectuses we may provide to you in connection with this offering. We have not, and A.G.P. has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and A.G.P. is not, making an offer to sell or seeking an offer to buy shares of our common stock under this prospectus in any jurisdiction where the offer or sale is not permitted. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus outside the United States.

Furthermore, you should not consider this prospectus supplement and the accompanying prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation. You should not assume that the information contained in this prospectus supplement and the accompanying prospectus or free writing prospectus is accurate as of any date other than the date on the front cover of those documents, or that the information contained in any document incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and therein, and any free writing prospectus prepared by or on behalf of us that we may authorize for use in connection with this offering, in their entirety, before making an investment decision. As referenced above, you should also read and consider the information in the documents to which we have referred you in the sections entitled “[Where You Can Find More Information](#)” and “[Incorporation of Certain Documents by Reference](#)” in this prospectus supplement and in the accompanying prospectus.

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to “NightHawk”, “NightHawk Biosciences,” “the Company,” “we,” “us,” “our” and similar references refer to NightHawk Biosciences, Inc., an entity incorporated under the laws of the State of Delaware, and where appropriate our consolidated subsidiaries.

This prospectus supplement contains and incorporates by reference market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe that these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. Although we are not aware of any misstatements regarding the market and industry data presented in this prospectus supplement and the documents incorporated herein by reference, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the sections entitled “[Risk Factors](#)” in this prospectus supplement and under similar sections in the other documents that are incorporated by reference into this prospectus supplement. Accordingly, investors should not place undue reliance on this information.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, including the documents that we incorporate by reference herein, may contain, forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (“the Exchange Act”), including statements regarding our future financial condition, business strategy and plans and objectives of management for future operations. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terminology such as “believe,” “will,” “may,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “might,” “approximately,” “expect,” “predict,” “could,” “potentially” or the negative of these terms or other similar expressions. Forward-looking statements include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations.

Discussions containing these forward-looking statements may be found, among other places, in the sections entitled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in the documents incorporated by reference in this prospectus supplement, including our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, as well as any amendments thereto.

These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus supplement in their entirety, many of these risks and uncertainties under the section entitled “Risk Factors” included in our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, as well as any amendments thereto, filed with the SEC, which are incorporated by reference into this prospectus supplement. Additional factors are discussed under the section entitled “Risk Factors” in this prospectus supplement, the accompanying prospectus and any free writing prospectus and under similar headings in the other documents that are incorporated by reference into this prospectus supplement. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. New risks and uncertainties arise from time to time, and it is impossible for us to predict these events or how they may affect us. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement and in the accompanying prospectus. This summary does not contain all of the information that you should consider before deciding to invest in our shares of common stock. You should read this entire prospectus supplement and the accompanying prospectus carefully, including the “Risk Factors” section in this prospectus supplement, the accompanying prospectus and under similar captions in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. In this prospectus supplement, unless otherwise stated or the context otherwise requires, references to “NightHawk”, “NightHawk Biosciences”, “the Company”, “we”, “us”, “our” or similar references mean NightHawk Biosciences, Inc. and its subsidiaries on a consolidated basis.

Overview

Our current focus is on our contract development and manufacturing organization (“CDMO”) that provides a comprehensive range of services from process development to Current Good Manufacturing Practices (“cGMP”) clinical and commercial manufacturing of biologics for the biotechnology and biopharmaceutical industries through our Scorpius Biomanufacturing, Inc. (“Scorpius”) subsidiary. Scorpius pairs cGMP biomanufacturing and quality control expertise with cutting edge capabilities in immunoassays, molecular assays, and bioanalytical methods to support cell- and gene-based therapies as well as large molecule biologics. Our services include clinical and commercial drug substance manufacturing, release and stability testing and variety of process development services, including upstream and downstream development and optimization, analytical method development, cell line development, testing and characterization. Our lead facility in San Antonio, Texas commenced operations in October 2022.

Corporate Information

We are a Delaware corporation. Our principal executive offices are located at 627 Davis Drive, Suite 300, Morrisville, North Carolina 27560 and our telephone number at this address is (919) 240-7133. Our website is www.nighthawkbio.com. Information contained on, or that may be accessible through, our website is not a part of, and is not incorporated into, this prospectus supplement.

Smaller Reporting Company

We are a “smaller reporting company” as defined in the Exchange Act. As a result, we may take advantage of certain reduced disclosure obligations available to smaller reporting companies, including the exemption from compliance with the auditor attestation requirements pursuant to the Sarbanes-Oxley Act of 2002, reduced disclosure about our executive compensation arrangements and the requirements to provide only two years of audited financial statements in our annual reports and registration statements. We will continue to be a “smaller reporting company” as long as (1) we have a public float (i.e., the market value of our common stock held by non-affiliates) less than \$250 million calculated as of the last business day of our most recently completed second fiscal quarter, or (2) our annual revenues are less than \$100 million for our previous fiscal year and we have either no public float or a public float of less than \$700 million as of the end of that fiscal year’s second fiscal quarter. Decreased disclosures in our SEC filings due to our status as a “smaller reporting company” may make it harder for investors to analyze our results of operations and financial prospects.

THE OFFERING

Issuer	NightHawk Biosciences, Inc.
Common stock to be offered by us pursuant to this prospectus supplement	10,624,193 shares of our common stock having an aggregate offering price of up to \$4,037,193 at an assumed offering price of \$0.38 per share, which was the approximate last reported sale price of our common stock on the NYSE American on December 1, 2023.
Common stock to be outstanding after the offering	Up to 36,706,083 shares (as more fully described in the notes following this table), assuming sales of \$4,037,193 of shares of our common stock, or 10,624,193 shares of our common stock in this offering at an assumed offering price of \$0.38 per share, which was the approximate last reported sale price of our common stock on the NYSE American on December 1, 2023. The actual number of shares issued will vary depending on the sales price under this offering. ⁽¹⁾
Manner of offering	“At the market offering” that may be made from time to time for our common stock in the United States through or to A.G.P., as sales agent or principal. See the section entitled See “ Plan of Distribution ” on page S-8 of this prospectus supplement.
Use of proceeds	We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including, to acquire, license or invest in assets, businesses, technologies, product candidates or other intellectual property and to repurchase securities. See “ Use of Proceeds ” on page S-7 of this prospectus supplement.
Risk factors	You should read the “ Risk Factors ” section beginning on page S-3 of this prospectus supplement and in the documents incorporated by reference in this prospectus supplement for a discussion of factors to consider before deciding to purchase shares of our common stock.
NYSE American trading symbol	NHWK

Unless we indicate otherwise, all information in this prospectus is based on 26,081,890 shares outstanding as of November 24, 2023. The number of shares outstanding as used throughout this prospectus, unless otherwise indicated, excludes:

- 6,719,943 shares of our common stock issuable upon the exercise of outstanding stock options as of December 1, 2023, with a weighted average exercise price of \$3.61 per share;
- 280,000 shares of our common stock issuable upon vesting of restricted stock units as of December 1, 2023, with an average fair value of \$1.18 per share; and
- 535,159 additional shares of our common stock reserved for future issuance under our equity incentive plans as of December 1, 2023.

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RISK FACTORS

Investing in our common stock involves a high degree of risk, and you should be able to bear the complete loss of your investment. You should consider carefully the risks described below and those described under the section captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2022, any subsequent Annual Reports on Form 10-K, any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus supplement and documents incorporated by reference into this prospectus supplement before deciding whether to purchase any of the common stock being offered under this prospectus supplement. If any of the risks actually occur, our business, consolidated 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 supplement as a result of different factors, including the risks we face described below. Unless we have indicated otherwise or the context otherwise requires, references in this prospectus supplement, the accompanying base prospectus or the documents incorporated by reference herein and therein to the “Company,” “NightHawk Biosciences,” “we,” “us” and “our” refer to NightHawk Biosciences, Inc.

Risks Related to this Offering

Our management will have broad discretion over the use of proceeds from this offering and may not use the proceeds effectively.

Our management will have broad discretion over the use of proceeds from this offering. We intend to use the net proceeds from this offering, if any, for working capital and general corporate purposes, including, to acquire, license or invest in assets, businesses, technologies, product candidates or other intellectual property and to repurchase securities. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds, if any, may be used for corporate purposes that do not improve our operating results or enhance the value of our common stock. The failure of our management to use these funds effectively could have a material adverse effect on our business and cause the market price of our common stock to decline. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing instruments and U.S. government securities. These investments may not yield a favorable return to our stockholders.

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. We expect to require additional capital until our operations generate sufficient revenue to cover our expenses. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. There are no other commitments by any person for future financing. Our securities may be offered to other investors at a price lower than the price per share offered to current stockholders, or upon terms which may be deemed more favorable than those offered to current stockholders. In addition, the issuance of securities in any future financing may dilute an investor’s equity ownership and have the effect of depressing the market price for our securities. 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.

We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by 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.

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

Our Third Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), authorizes the issuance of 250,000,000 shares of our common stock and 10,000,000 shares of preferred stock. In certain circumstances, shares of our common stock, as well as the awards available for issuance under our equity incentive plans, 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 our common stock and preferred stock. In addition, the issuance of certain securities, including pursuant to the terms of our stockholder rights plan, 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.

Because we do not intend to declare cash dividends on our shares of common stock in the foreseeable future, stockholders must rely on appreciation of the value of our common stock for any return on their investment.

As stated above, we have never declared or paid cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends in the foreseeable future. As a result, we expect that only appreciation of the price of our common stock, if any, will provide a return to investors in this offering for the foreseeable future.

Resales of our common stock in the public market during this offering by our stockholders may cause the market price of our common stock to fall.

We may issue shares of our common stock from time to time in connection with this offering. This issuance from time to time of these new shares of our common stock, or our ability to issue these shares of our common stock in this offering, could result in resales of our common stock by our current stockholders concerned about the potential dilution of their holdings. In turn, these resales could have the effect of depressing the market price for our common stock.

The actual number of shares we will issue under the sales agreement, at any one time or in total, is uncertain.

Subject to certain limitations in the sales agreement with the sales agent and compliance with applicable law, we have the discretion to deliver placement notices to the sales agent at any time throughout the term of the sales agreement. The number of shares that are sold by the sales agent after delivering a placement notice will fluctuate based on the market price of the common stock during the sales period and limits we set with the sales agent.

The shares of common stock offered under this prospectus supplement and documents incorporated by reference into this prospectus supplement may be sold in "at the market offerings," and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares under this prospectus supplement and documents incorporated by reference into this prospectus supplement at different times will likely pay different prices, and so may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold, and there is no minimum or maximum sales price. Investors may experience declines in the value of their shares as a result of share sales made at prices lower than the prices they paid.

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USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate gross proceeds of up to \$4,037,193 from time to time under this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein. Because there is no minimum offering amount required as a condition to close this offering, the actual total offering amount, commissions and proceeds to us, if any, are not determinable at this time. The amount of proceeds from this offering will depend upon the number of shares of our common stock sold and the market price at which they are sold. There can be no assurance that we will be able to sell any shares of our common stock under or fully utilize the sales agreement with A.G.P. as a source of financing.

We intend to use the net proceeds, if any, from the sales of shares of our common stock offered by this prospectus supplement for working capital and general corporate purposes, including, to acquire, license or invest in assets, businesses, technologies, product candidates or other intellectual property and to repurchase securities. We have broad discretion in determining how the proceeds of this offering will be used, and our discretion is not limited by the aforementioned possible uses. Our Board of Directors believes the flexibility in application of the net proceeds is prudent.

As of the date of this prospectus supplement, 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 our operating costs and the amount of funding, if any, received from grants. 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 as we do not intend to use the net proceeds for other purposes. Pending such uses set forth above, we plan to invest the net proceeds in government securities and other short-term investment grade, marketable securities.

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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 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.

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PLAN OF DISTRIBUTION

We entered into the sales agreement with A.G.P. under which we may issue and sell from time to time shares of our common stock having an aggregate offering price of up to \$4,037,193 to or through A.G.P., acting as our sales agent or principal. The sales of shares of our common stock, if any, under this prospectus supplement will be made at market prices by any method deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act.

Each time that we wish to issue and sell shares of our common stock under the sales agreement, we will provide A.G.P. with a placement notice describing the amount of shares to be sold, the time period during which sales are requested to be made, any limitation on the amount of shares of our common stock that may be sold in any single day, any minimum price below which sales may not be made or any minimum price requested for sales in a given time period and any other instructions relevant to such requested sales. Upon receipt of a placement notice, A.G.P., acting as our sales agent, will use commercially reasonable efforts, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the NYSE American, to sell shares of our common stock under the terms and subject to the conditions of the placement notice and the sales agreement. We or A.G.P. may suspend the offering of shares of our common stock pursuant to a placement notice upon notice.

Settlement for sales of shares of common stock, unless the parties agree otherwise, will occur on the second trading day following the date on which any sales are made in return for payment of the net proceeds to us. There are no arrangements to place any of the proceeds of this offering in an escrow, trust or similar account. Sales of shares of our common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and A.G.P. may agree upon.

A.G.P. will be entitled to compensation at a fixed commission rate of 3.0% of the gross proceeds from the sale of shares of our common stock on our behalf pursuant to the sales agreement. Pursuant to the terms of the sales agreement, we agreed to reimburse A.G.P. for the documented fees and costs of its legal counsel reasonably incurred in connection with entering into the transactions contemplated by the sales agreement in an amount not to exceed \$50,000 in the aggregate, in addition to up to \$10,000 annually for A.G.P.’s counsel’s fees and any incidental expenses to be reimbursed by us. We will report at least quarterly the number of shares of common stock sold through A.G.P. under the sales agreement, the net proceeds to us and the compensation paid by us to A.G.P. in connection with the sales of common stock.

We estimate that the total expenses for this offering, excluding compensation payable to A.G.P. and certain expenses reimbursable to A.G.P. under the terms of the sales agreement, will be approximately \$125,000. The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such shares of common stock.

Because there are no minimum sale requirements as a condition to this offering, the actual total public offering price, commissions and net proceeds to us, if any, are not determinable at this time. The actual dollar amount and number of shares of common stock we sell through this prospectus supplement will be dependent, among other things, on market conditions and our capital raising requirements.

In connection with the sale of shares of common stock on our behalf, A.G.P. will be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of A.G.P. will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to A.G.P. against certain civil liabilities, including liabilities under the Securities Act.

A.G.P. will not engage in any market making activities involving shares of our common stock while the offering is ongoing under this prospectus supplement if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Securities Act. As our sales agent, A.G.P. will not engage in any transactions that stabilizes shares of our common stock.

The offering pursuant to the sales agreement will terminate upon the earlier of (i) the sale of all shares of common stock subject to the sales agreement and (ii) termination of the sales agreement as permitted therein. We may terminate the sales agreement in our sole discretion at any time by giving one (1) day’s prior notice to A.G.P. A.G.P. may terminate the sales agreement under the circumstances specified in the sales agreement and in its sole discretion at any time by giving five (5) days’ prior notice to us.

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A.G.P. and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us, for which services they have received and may in the future receive customary fees. In addition, A.G.P. served as a financial advisor with respect to our search for strategic alternatives.

This prospectus supplement and the accompanying prospectus may be made available in electronic format on a website maintained by A.G.P., and A.G.P. may distribute this prospectus supplement and the accompanying prospectus electronically.

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LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Blank Rome LLP, New York, New York. Duane Morris LLP, New York, New York, is acting as counsel to the sales agent in this offering.

As of the date of this prospectus supplement, an attorney of Blank Rome LLP beneficially owns common stock and securities exercisable to purchase shares of our common stock that represent less than 1% of our outstanding shares of common stock.

EXPERTS

The consolidated financial statements as of December 31, 2022 and 2021 and for the years then ended, incorporated by reference in this prospectus supplement have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.C.), an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in accounting and auditing. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company’s ability to continue as a going concern

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these shares of our common stock in any state where the offer is not permitted. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date on the front page of this prospectus

supplement, regardless of the time of delivery of this prospectus supplement or any sale of the shares of our common stock offered by this prospectus supplement.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public at the SEC's website at www.sec.gov. Our SEC filings are also available on our website, www.nighthawkbio.com under the heading "Investors & News—SEC Filings." The reference to our website is an inactive textual reference only, the information contained in, and that can be accessed through our website, is not incorporated into and is not a part of this prospectus supplement. We make available on our website our SEC filings as soon as reasonably practicable after those reports are filed with the SEC.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus supplement is 001-35994. The documents incorporated by reference into this prospectus supplement contain important information that you should read about us.

The following documents are incorporated by reference into this prospectus supplement:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022 filed with the SEC on March 31, 2023;
- Our Quarterly Report on [Form 10-Q](#) for the fiscal quarter ended March 31, 2023 filed with the SEC on May 15, 2023, our Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2023 filed with the SEC on August 14, 2023, and our Quarterly Report on [Form 10-Q](#) for the quarter ended September 30, 2023 filed with the SEC on November 20, 2023;
- Our Current Report on Form 8-K filed with the SEC on [January 5, 2023](#), [February 2, 2023](#), [March 13, 2023](#), [March 23, 2023](#), [August 21, 2023](#), [September 19, 2023](#), as amended on [September 20, 2023](#), and [September 28, 2023](#); and
- The description of our common stock and our common stock purchase rights is set forth in our registration statement on [Form 8-A](#) filed with the SEC on February 4, 2022, [Form 8-A/A](#) (Amendment No. 1) filed on March 11, 2022 and [Form 8-A/A](#) (Amendment No. 2) filed on March 13, 2023, as updated by the description of our common stock filed as Exhibit 4.18 to our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 31, 2023, including any amendments or reports filed for the purpose of updating such description.

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We also incorporate by reference into this prospectus supplement all documents (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items or other information "furnished" to the SEC, which is not deemed filed and not incorporated in this prospectus supplement) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and before the completion of the offering of the securities included in this prospectus supplement. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement, including exhibits that are specifically incorporated by reference into such documents. You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

NightHawk Biosciences, Inc.
627 Davis Drive, Suite 300
Morrisville, North Carolina 27560
Telephone: (919) 240-7133
Attn: Investor Relations

Any statement contained in this prospectus supplement or contained in a document incorporated or deemed to be incorporated by reference into this prospectus supplement will be deemed to be modified or superseded to the extent that a statement contained in this prospectus supplement or any subsequently filed supplement to this prospectus supplement, or document deemed to be incorporated by reference into this prospectus supplement, modifies or supersedes such statement.

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PROSPECTUS

\$250,000,000



Common Stock
Preferred Stock
Warrants
Units

We may offer and sell up to \$250,000,000 in the aggregate of any combination of the securities identified above from time to time in one or more offerings. This prospectus provides you with a general description of the securities. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings.

Each time we offer and sell securities, we will provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus

and the applicable prospectus supplement and any related free writing prospectus before you invest in any of our securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled “[About this Prospectus](#)” and “Plan of Distribution” for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on the Nasdaq Capital Market under the symbol “HTBX.” On December 4, 2020, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.06 per share.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “[Risk Factors](#)” contained in the applicable prospectus supplement and in any free writing prospectuses we have authorized for use in connection with a specific offering, and under similar headings in the other documents that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is December 22, 2020

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You should rely only on the information we have provided or incorporated by reference in this prospectus or in any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus or in any prospectus supplement. This prospectus and any prospectus supplement is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information contained in this prospectus and in any prospectus supplement is accurate only as of their respective dates and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any prospective supplement or any sale of securities. The registration statement, including the exhibits and the documents incorporated herein by reference, can be read on the Securities and Exchange Commission website or at the Securities and Exchange Commission offices mentioned under the heading “Where You Can Find More Information.”

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, (the “SEC”), using a “shelf” registration process. By using a shelf registration statement, we may sell securities from time to time and in one or more offerings up to a total dollar amount of \$250,000,000 of securities as described in this prospectus. Each time that we offer and sell securities, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you should rely on the prospectus supplement. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement and any related free writing prospectus, together with the additional information described under the heading “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT

Neither we, nor any agent, underwriter or dealer has authorized any person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus prepared by or on behalf of us or to which we have referred you. This prospectus, any applicable supplement to this prospectus or any related free writing prospectus does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus, any applicable supplement to this prospectus or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the

document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section entitled "[Where You Can Find More Information](#)."

Unless otherwise stated or the context otherwise requires, references in this prospectus to "Heat," the "Company," "we," "our" and "us" refer to Heat Biologics, Inc., a Delaware corporation and its consolidated subsidiaries, unless otherwise specified. When we refer to "you," we mean the holders of the applicable series of securities.

In addition, information in this prospectus *does not* reflect a one-for-seven reverse stock split of our issued and outstanding shares of common stock, options and warrants that will be effected on December 11, 2020. The information disclosed in this prospectus regarding common stock prices per share or stock option and warrant exercise prices per share has not been adjusted to reflect the reverse stock split.

PROSPECTUS SUMMARY

The items in the following summary are described in more detail elsewhere in this prospectus and in the documents incorporated by reference herein. This summary provides an overview of selected information and does not contain all the information you should consider before investing in our securities. Therefore, you should carefully read the entire prospectus, any prospectus supplement and any free writing prospectus that we have authorized for use in connection with this offering, including the "Risk Factors" section and other documents or information included or incorporated by reference in this prospectus and any prospectus supplement before making any investment decision.

Overview

We are a biopharmaceutical company primarily engaged in the development of immune therapies and vaccines. Our gp96 platform is designed to activate the immune system. This platform has broad applications in cancer and infectious disease. Our platform leverages gp96's role as a natural molecular warning system that presents antigens to the immune system. HS-110 (viagenpumatucl-L) is our first allogeneic ("off-the-shelf") cell line biologic product candidate in a series of proprietary immunotherapies designed to stimulate a patient's T-cells to destroy cancer. HS-130 is an allogeneic cell line engineered to express the extracellular domain of OX40 ligand fusion protein (OX40L-Fc), a key costimulator of T-cells, with the potential to augment antigen-specific CD4+ T-cell and CD8+ T-cell responses. We have initiated development of a new COVID-19 vaccine program under our Zolovax, Inc. subsidiary that utilizes our gp96 platform to secrete SARS-CoV-2 antigens. Our subsidiary Pelican Therapeutics, Inc. ("Pelican"), is developing PTX-35, a novel T-cell co-stimulator agonist antibody targeting TNFRSF25 for systemic administration.

These programs are designed to harness the body's natural antigen specific immune activation and tolerance mechanisms to reprogram immunity and provide a long-term, durable clinical effect. We have completed recruiting patients in our Phase 2 HS-110 non-small cell lung cancer (NSCLC) trial, dosed twelve patients in our Phase 1 clinical trial of HS-130 and dosed five patients in our Phase 1 clinical trial of PTX-35. We are also providing pre-clinical, CMC development, and administrative support for these operations; while constantly focusing on protecting and expanding our intellectual property in areas of strategic interest. As we advance our clinical programs, we are in close contact with our CROs and clinical sites and are assessing the impact of COVID-19 on our studies and current timelines and costs.

General Corporate Information

We were incorporated under the laws of the State of Delaware on June 10, 2008. Our principal offices are located at 627 Davis Drive, Suite 400, Morrisville, North Carolina. Our website address is www.heatbio.com. We make our periodic and current reports that are filed with the Securities and Exchange Commission (the "SEC") available, free of charge, on our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, and that can be accessed through, our website is not incorporated into and is not a part of this prospectus.

Risks Associated with our Business

Our business is subject to numerous risks, as described under the heading "Risk Factors" contained in the applicable prospectus supplement and in any free writing prospectuses we have authorized for use in connection with a specific offering, and under similar headings in the documents that are incorporated by reference into this prospectus.

The Securities We May Offer

We may offer shares of our common stock and preferred stock, and/or warrants to purchase any of such securities, either individually or in combination with other securities or as units, with a total value of up to \$250,000,000 from time to time under this prospectus, together with the applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity date, if applicable;
- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exercise, exchange or sinking fund terms, if any;
- ranking;
- restrictive covenants, if any;
- voting or other rights, if any;
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange; and
- material or special U.S. federal income tax considerations, if any.

The applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

We may offer and sell these securities directly to investors or to or through one or more agents, underwriters, dealers or other third parties. We or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities to or through agents or underwriters, we will include in the applicable prospectus supplement:

- the names of those agents or underwriters;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the net proceeds to us.

Common Stock

We may issue shares of our common stock from time to time. The holders of our common stock are entitled to one vote per share on all matters to be voted on by the shareholders and do not have cumulative voting rights. 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 out of funds legally available therefore. 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. The holders of our common stock have no preemptive, conversion or subscription rights and 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.

In this prospectus, we have summarized certain general features of our common stock under “Description of Capital Stock—Common Stock.” We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to any common stock being offered.

Preferred Stock

In this prospectus, we have summarized certain general features of the preferred stock under “Description of Capital Stock—Preferred Stock.” We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

We currently do not have authority to issue shares of our preferred stock without further action by our stockholders. Under our Third Amended and Restated Certificate of Incorporation, as amended, our Board of Directors has the authority, with further action by the stockholders (unless such stockholder action is required by applicable law or the rules of any stock exchange or market on which our securities are then traded), to designate and issue up to 10,000,000 shares of preferred stock in one or more series (of which an aggregate of 8,212,500 have been designated as follows: 112,500 shares have been designated Series 1 Preferred Stock, 2,000,000 shares have been designated Series A Preferred Stock, 4,100,000 have been designated as Series B-1 Preferred Stock and 2,000,000 have been designated Series B-2 Preferred Stock), to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. No shares of preferred stock are outstanding. Any authorized and undesignated shares of preferred stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by our Board of Directors will require additional stockholder approval. If we sell any series of preferred stock under this prospectus, we will fix the designations, voting powers, preferences and rights of such series of preferred stock, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock that we are offering before the issuance of the related series of preferred stock. We urge you to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Warrants

We may issue warrants for the purchase of common stock and/or preferred stock in one or more series. We may issue warrants independently or in combination with common stock and/or preferred stock. In this prospectus, we have summarized certain general features of the warrants under “Description of Warrants.”

We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the particular series of warrants we are offering, and any supplemental agreements, before the issuance of such warrants.

Warrants may be issued under a warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if any, in the applicable prospectus supplement relating to a particular series of warrants.

Units

We may offer units consisting of our common stock or preferred stock, and/or warrants to purchase any of these securities in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units. This prospectus contains only a summary of certain general features of the units. The applicable prospectus supplement will describe the particular features of the units being offered thereby. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and will be incorporated by reference into the registration statement of which this prospectus is apart from reports we file with the SEC.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties described under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and discussed under the section entitled “Risk Factors” contained in our most recent Annual Report on Form 10-K, as may be updated by subsequent annual, quarterly and other reports that are incorporated by reference into this prospectus in their entirety. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below entitled “[Forward-Looking Statements](#).”

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FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference herein, contains, and any applicable prospectus supplement or free writing prospectus including the documents we incorporate by reference therein may contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, including statements regarding our future financial condition, business strategy and plans and objectives of management for future operations. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terminology such as “believe,” “will,” “may,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “might,” “approximately,” “expect,” “predict,” “could,” “potentially” or the negative of these terms or other similar expressions. Forward-looking statements appear in a number of places throughout this prospectus and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our ongoing and planned preclinical development and clinical trials, the timing of and our ability to make regulatory filings and obtain and maintain regulatory approvals for our product candidates, our intellectual property position, the degree of clinical utility of our product candidates, our ability to develop commercial functions, expectations regarding clinical trial data, our results of operations, cash needs, spending of the proceeds from any offering, financial condition, liquidity, prospects, growth and strategies, the industry in which we operate and the trends that may affect the industry or us.

Discussions containing these forward-looking statements may be found, among other places, in the sections entitled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in the documents incorporated by reference herein, including our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, as well as any amendments thereto.

These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus in their entirety, many of these risks and uncertainties under the heading “Risk Factors” contained in the applicable prospectus supplement, in any free writing prospectus we may authorize for use in connection with a specific offering, and in the documents incorporated by reference herein. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

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USE OF PROCEEDS

We intend to use the net proceeds, if any, from the sales of securities offered by this prospectus to fund our and our subsidiaries’ preclinical and clinical programs and for working capital and general corporate purposes, including, to acquire, license or invest in assets, businesses, technologies, product candidates or other intellectual property, to fund our milestone payment obligations under our license agreements and our stock purchase agreement with the prior stockholders of Pelican and to repurchase securities. We have broad discretion in determining how the proceeds of this offering will be used, and our discretion is not limited by the aforementioned possible uses. Our Board of Directors believes the flexibility in application of the net proceeds is prudent.

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 and the amount of funding, if any, received from grants. 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 as we do not intend to use the net proceeds for other purposes. Pending such uses set forth above, we plan to invest the net proceeds in government securities and other short-term investment grade, marketable securities.

DIVIDEND POLICY

We have never paid cash dividends on our common stock. Moreover, we do not anticipate paying periodic cash dividends on our common stock for the foreseeable future. We intend to use all available cash and liquid assets in the operation and growth of our business. Any future determination about the payment of dividends will be made at the discretion of our Board of Directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our Board of Directors deems relevant.

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DESCRIPTION OF OUR CAPITAL STOCK

General

The following is a summary of the rights of our common stock, preferred stock and outstanding warrants and related provisions of our certificate of incorporation, bylaws and warrants. For more detailed information, please see our certificate of incorporation and bylaws, each as amended.

We are authorized to issue 250,000,000 shares of common stock, par value \$0.0002 per share, of which 159,828,939 shares are outstanding as of December 3, 2020, and

10,000,000 shares of preferred stock, par value \$0.0001 per share, of which an aggregate of 8,212,500 shares have been designated as follows: 112,500 shares are designated Series 1 Preferred Stock, 2,000,000 shares are designated Series A Preferred Stock, 4,100,000 are designated as Series B-1 Preferred Stock and 2,000,000 are designated Series B-2 Preferred Stock. There are currently no shares of preferred stock outstanding.

Common Stock

Voting. The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and do not have cumulative voting rights.

Dividends. Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our Board of Directors out of legally available funds.

Liquidation. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences. The holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable. All of our outstanding shares of common stock are, and the shares of common stock to be issued under this prospectus will be, fully paid and nonassessable.

Preferred Stock

The following description of our preferred stock will apply generally to any future preferred stock that we may offer, but is not complete. We will describe the particular terms of any class or series of these securities in more detail in the applicable prospectus supplement.

We are authorized to issue 10,000,000 shares of Preferred Stock, par value \$.0001 per share, of which an aggregate of 8,212,500 shares have been designated as follows: 112,500 shares have been designated Series 1 Preferred Stock, 2,000,000 shares have been designated Series A Preferred Stock, 4,100,000 have been designated as Series B-1 Preferred Stock and 2,000,000 have been designated Series B-2 Preferred Stock. No shares of preferred stock are outstanding. Any authorized and undesignated shares of preferred stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by our Board of Directors and upon stockholder approval.

Under our Third Amended and Restated Certificate of Incorporation, as amended, our Board of Directors must seek stockholder approval before issuing any shares of preferred stock in order to determine the designations and the powers, preferences and rights, and the qualifications, limitations and restrictions thereof, including the dividend rights, conversion or exchange rights, voting rights, redemption rights and terms, liquidation preferences, sinking fund provisions and the number of shares constituting the series. Our Board of Directors can, only with stockholder approval, but subject to the terms of the Third Amended and Restated Certificate of Incorporation, as amended, issue preferred stock with voting and other rights that could adversely affect the voting power of the holders of our common stock and which could have certain anti-takeover effects. Before we may issue any series of preferred stock, our Board of Directors will be required to adopt resolutions creating and designating such series of preferred stock.

The following summary of terms of our preferred stock is not complete. You should refer to the provisions of our certificate of incorporation and bylaws and the resolutions containing the terms of each class or series of the preferred stock which have been or will be filed with the SEC at or prior to the time of issuance of such class or series of preferred stock and described in any applicable prospectus supplement. Any applicable prospectus supplement may also state that any of the terms set forth herein are inapplicable to such series of preferred stock, provided that the information set forth in such prospectus supplement does not constitute material changes to the information herein such that it alters the nature of the offering or the securities offered.

We will fix the designations, voting powers, preferences and rights of the preferred stock of each series we issue under this prospectus, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering. We will describe in any applicable prospectus supplement the terms of the series of preferred stock being offered, including, to the extent applicable:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing;
- the provisions for a sinking fund;
- the provisions for redemption or repurchase and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and the conversion rate or conversion price, or how they will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and the exchange rate or exchange price, or how they will be calculated, and the exchange period;

- voting rights of the preferred stock;
- preemptive rights;
- restrictions on transfer, sale or other assignment;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of material or special U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, the shares will be fully paid and nonassessable.

The issuance of preferred stock could adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation. The issuance could have the effect of decreasing the market price of the common stock. The issuance of preferred stock also could have the effect of delaying, deterring or preventing a change in control of us.

Options

As of December 3, 2020, awards for 11,153,843 shares of common stock were outstanding under our equity compensation plans comprised of: (i) options outstanding to purchase an aggregate of 9,162,450 shares of common stock, and (ii) restricted stock units outstanding underlying 1,991,393 shares of common stock. As of December 3, 2020, 13,738,026 shares of common stock were reserved for future issuance under our equity incentive plans.

Stockholder Rights Plan

On March 11, 2018, our board of directors declared a dividend of one Right for each outstanding share of our common stock, which was amended by Amendment No. 1 thereto on March 8, 2019 and by Amendment No. 2 thereto on March 10, 2020 to extend the expiration date of the stockholder's rights plan to March 11, 2021. The dividend was initially paid on March 23, 2018 (the "Record Date") to the stockholders of record at the close of business on that date. Each Right initially entitles the registered holder to purchase from us one share of common stock at a price of \$14.00 per share of common stock (the "Purchase Price"), subject to adjustment. The description and terms of the Rights are set forth in a 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, as the same may be further amended from time to time (the "Rights Agreement"), between the Company and Continental Stock Transfer & Trust Company, as Rights Agent (the "Rights Agent").

The Rights are designed to assure that all of our stockholders receive fair and equal treatment in the event of a hostile takeover of the Company, to guard against two-tier or partial tender offers, open market accumulations and other tactics designed to gain control of the Company without paying all stockholders a fair price, and to enhance the board of director's ability to negotiate with any prospective acquiror. Until the earlier to occur of (i) 10 business days following a public announcement that a person or group of affiliated or associated persons has become an Acquiring Person (as defined below) or (ii) 10 business days (or such later date as may be determined by action of the board of directors prior to such time as any person or group of affiliated or associated persons becomes an Acquiring Person) following the commencement of, or public announcement of an intention to make, a tender or exchange offer the consummation of which would result in any person or group of affiliated or associated persons becoming an Acquiring Person (the earlier of such dates being called the "Distribution Date"), the Rights will be evidenced, with respect to certificates representing common stock (or book entry shares of common stock) outstanding as of the Record Date, by such certificates (or such book entry shares) together with a copy of a summary of the Rights (the "Summary of Rights"). Except in certain situations, a person or group of affiliated or associated persons becomes an "Acquiring Person" upon acquiring beneficial ownership of 20% or more of the outstanding shares of common stock. Certain synthetic interests in securities created by derivative positions – whether or not such interests are considered to be ownership of the underlying common stock or are reportable for purposes of Regulation 13D of the Exchange Act – are treated as beneficial ownership of the number of shares of the common stock equivalent to the economic exposure created by the derivative security, to the extent actual shares of common stock are directly or indirectly beneficially owned by a counterparty to such derivative security.

The Rights Agreement provides that, until the Distribution Date (or earlier expiration of the Rights), the Rights will be transferred with and only with the common stock. Until the Distribution Date (or earlier expiration of the Rights), new common stock certificates issued after the Record Date upon transfer or new issuances of common stock will contain a notation incorporating the Rights Agreement by reference. Until the Distribution Date (or earlier expiration of the Rights), the surrender for transfer of any certificates for shares of common stock (or book entry shares of common stock) outstanding as of the Record Date, even without such notation or a copy of the Summary of Rights, will also constitute the transfer of the Rights associated with the shares of common stock represented thereby. As soon as practicable following the Distribution Date, separate certificates evidencing the Rights ("Right Certificates") will be mailed to holders of record of the common stock as of the close of business on the Distribution Date and such separate Right Certificates alone will evidence the Rights.

The Rights are not exercisable until the Distribution Date. The Rights will expire at the close of business on March 11, 2021, unless the Rights are earlier redeemed or exchanged by the Company as described below.

The Purchase Price payable, and the number of shares of common stock (or cash, other assets, debt securities of the Company, or any combination thereof equivalent in value thereto) issuable, upon exercise of the Rights is subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the common stock, (ii) upon the grant to holders of the common stock of certain rights or warrants to subscribe for or purchase common stock at a price, or securities convertible into common stock with a conversion price, less than the then-current market price of the common stock or (iii) upon the distribution to holders of the common stock of evidences of indebtedness or assets (excluding regular periodic cash dividends or dividends payable in common stock) or of subscription rights or warrants (other than those referred to above).

The number of outstanding Rights is subject to adjustment in the event of a stock dividend on the common stock payable in shares of common stock or subdivisions, consolidations or combinations of the common stock occurring, in any such case, prior to the Distribution Date.

property debt securities of the Company, or any combination thereof) having a market value of two times the exercise price of the Right.

In the event that, after a person or group has become an Acquiring Person, the Company is acquired in a merger or other business combination transaction or 50% or more of its consolidated assets or earning power are sold, proper provisions will be made so that each holder of a Right (other than Rights beneficially owned by an Acquiring Person which will have become void) will thereafter have the right to receive upon the exercise of a Right that number of shares of common stock of the person with whom the Company has engaged in the foregoing transaction (or its parent) that at the time of such transaction have a market value of two times the exercise price of the Right.

At any time after any person or group becomes an Acquiring Person and prior to the earlier of one of the events described in the previous paragraph or the acquisition by such Acquiring Person of 50% or more of the outstanding shares of common stock, the board of directors may exchange the Rights (other than Rights owned by such Acquiring Person which will have become void), in whole or in part, for shares of common stock (or cash, other assets, debt securities of the Company, or any combination thereof with an aggregate value equal to such shares) at an exchange ratio of one share of common stock (or cash, other assets, debt securities of the Company, or any combination thereof equivalent in value thereto) per Right.

With certain exceptions, no adjustment in the Purchase Price will be required until cumulative adjustments require an adjustment of at least 1% in such Purchase Price. No fractional shares of common stock will be issued, and in lieu thereof a cash payment will be made based on then current market price of the common stock.

At any time prior to the time an Acquiring Person becomes such, the Board may redeem the Rights in whole, but not in part, at a price of \$0.001 per Right (the "Redemption Price") payable, at the option of the Company, in cash, shares of common stock or such other form of consideration as the board of directors shall determine. The redemption of the Rights may be made effective at such time, on such basis and with such conditions as the board of directors in its sole discretion may establish. Immediately upon any redemption of the Rights, the right to exercise the Rights will terminate and the only right of the holders of Rights will be to receive the Redemption Price.

For so long as the Rights are then redeemable, the Company may, except with respect to the Redemption Price, amend the Rights Agreement in any manner. After the Rights are no longer redeemable, the Company may, except with respect to the Redemption Price, amend the Rights Agreement in any manner that does not adversely affect the interests of holders of the Rights.

Until a Right is exercised or exchanged, the holder thereof, as such, will have no rights as a stockholder of the Company, including, without limitation, the right to vote or to receive dividends. For more detailed information, please see the Rights Agreement.

Potential Anti-Takeover Effects

Certain provisions set forth in our third amended and restated certificate of incorporation, as amended, in our bylaws, our stockholder rights plan and in Delaware law, which are summarized below, may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Proposals of business and nominations. Our bylaws generally regulate proposals of business and nominations for election of directors by stockholders. In general, Section 2.14 requires stockholders intending to submit proposals or nominations at a stockholders meeting to provide the Company with advance notice thereof, including information regarding the stockholder proposing the business or nomination as well as information regarding the proposed business or nominee. Section 2.14 provides a time period during which business or nominations must be provided to the Company that will create a predictable window for the submission of such notices, eliminating the risk that the Company finds a meeting will be contested after printing its proxy materials for an uncontested election and providing the Company with a reasonable opportunity to respond to nominations and proposals by stockholders.

Board Vacancies. Our bylaws generally provide that only the Board of Directors (and not the stockholders) may fill vacancies and newly created directorships.

Special Meeting of Stockholders. Our bylaws generally provide that only the Board of Directors (and no other third party) may call a special meeting of stockholders and that the Board of Directors may postpone, reschedule or cancel any special meeting of stockholders that was previously scheduled by the Board of Directors.

Stockholder Rights Plan. The rights issued pursuant to our stockholder rights plan, if not redeemed or suspended, could work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our Board of Directors.

While the foregoing provisions of our certificate of incorporation, bylaws and Delaware law may have an anti-takeover effect, these provisions are intended to enhance the likelihood of continuity and stability in the composition of the Board of Directors and in the policies formulated by the Board of Directors and to discourage certain types of transactions that may involve an actual or threatened change of control. In that regard, these provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our common stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management.

Exclusive forum for adjudication of disputes provision which limits the forum to the Delaware Court of Chancery for certain actions against the Company.

Our amended and restated bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or other employees to us or our stockholders, (iii) any action arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws (as either may be amended from time to time), or (iv) any action asserting a claim governed by the internal affairs doctrine, except, in each case for claims arising under the Securities Act of 1933, as amended, the Exchange Act, or other federal securities laws for which there is exclusive federal or concurrent federal and state jurisdiction.

We believe limiting state law based claims to Delaware will provide the most appropriate outcomes as the risk of another forum misapplying Delaware law is avoided, Delaware courts have a well-developed body of case law and limiting the forum will preclude costly and duplicative litigation and avoids the risk of inconsistent outcomes. Additionally, Delaware Chancery Courts can typically resolve disputes on an accelerated schedule when compared to other forums. While we believe limiting the forum for state law based claims is a benefit, shareholders could be inconvenienced by not being able to bring certain actions in another forum they find favorable.

Delaware Takeover Statute

In general, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation that is a public company from engaging in any "business combination" (as defined below) with any "interested stockholder" (defined generally as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with such entity or person) for a period of three years following the date that such stockholder became an interested stockholder, unless: (1) prior to such date, the Board of Directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (2) on consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the

voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned (x) by persons who are directors and also officers and (y) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or (3) on or subsequent to such date, the business combination is approved by the Board of Directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 of the Delaware General Corporation Law defines “business combination” to include: (1) any merger or consolidation involving the corporation and the interested stockholder; (2) any sale, transfer, pledge or other disposition of ten percent or more of the assets of the corporation involving the interested stockholder; (3) subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; (4) any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or (5) the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

Listing of Common Stock

Our common stock is currently listed on the Nasdaq Capital Market under the trading symbol “HTBX.”

Transfer Agent

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. They are located at 1 State Street, 30th Floor, New York, New York 10004. Their telephone number is (212) 509-4000.

The transfer agent and registrar for any series or class of preferred stock will be set forth in the applicable prospectus supplement.

DESCRIPTION OF WARRANTS

Warrants

As of December 3, 2020, we had warrants outstanding to purchase an aggregate of 5,312,564 shares of our common stock that have a weighted average exercise price of \$2.08 and expire between March 10, 2021 and November 26, 2023.

We may issue warrants for the purchase of common stock or preferred stock. We may issue warrants independently or in combination with common stock or preferred stock. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as any warrant agreements and warrant certificates that contain the terms of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the particular series of warrants we are offering, and any supplemental agreements, before the issuance of such warrants.

Any warrants issued under this prospectus may be evidenced by warrant certificates. Warrants also may be issued under an applicable warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if applicable, in the prospectus supplement relating to the particular series of warrants being offered.

The following description, together with the additional information that we include in any applicable prospectus supplement and in any related free writing prospectus that we may authorize to be distributed to you, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may be issued in one or more series. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement and in any related free writing prospectus that we may authorize to be distributed to you. The following description of warrants will apply to the warrants offered by this prospectus unless we provide otherwise in the applicable prospectus supplement. The applicable prospectus supplement for a particular series of warrants may specify different or additional terms.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the particular series of warrants we are offering, and any supplemental agreements, before the issuance of such warrants.

The summary below and that contained in any prospectus supplement is qualified in its entirety by reference to all of the provisions of the warrant and/or the warrant agreement and warrant certificate, as applicable, applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the warrants that we may offer under this prospectus, as well as the complete warrant and/or the warrant agreement and warrant certificate, as applicable, that contains the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms of the series of warrants being offered, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the number of warrants issued with each such security;
- the number of shares of common stock and/or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special U.S. federal income tax considerations of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any:

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. The warrants may be exercised as set forth in the prospectus supplement relating to the warrants offered. Unless we otherwise specify in the applicable prospectus supplement, warrants may be exercised at any time up to the close of business on the expiration date set forth in the prospectus supplement relating to the warrants offered thereby. After the close of business on the expiration date, unexercised warrants will become void.

Upon receipt of payment and the warrant or warrant certificate, as applicable, properly completed and duly executed at the corporate trust office of the warrant agent, if any, or any other office, including ours, indicated in the prospectus supplement, we will, as soon as practicable, issue and deliver the securities purchasable upon such exercise. If less than all of the warrants (or the warrants represented by such warrant certificate) are exercised, a new warrant or a new warrant certificate, as applicable, will be issued for the remaining warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent, if any, will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A warrant agent may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Governing Law

Unless we otherwise specify in the applicable prospectus supplement, the warrants and any warrant agreements will be governed by and construed in accordance with the laws of the State of New York.

DESCRIPTION OF UNITS

Units

We may issue units consisting of any combination of our common stock, preferred stock and warrants. We will issue each unit so that the holder of the unit is also the holder of each security included in the unit. As a result, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The summary below and that contained in any prospectus supplement is qualified in its entirety by reference to all of the provisions of the unit agreement and/or unit certificate, and depositary arrangements, if applicable. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the units that we may offer under this prospectus, as well as the complete unit agreement and/or unit certificate, and depositary arrangements, as applicable, that contain the terms of the units.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of unit agreement and/or unit certificate, and depositary arrangements, as applicable, that contain the terms of the particular series of units we are offering, and any supplemental agreements, before the issuance of such units.

The applicable prospectus supplement, information incorporated by reference or free writing prospectus may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions for the issuance, payment, settlement, transfer, or exchange of the units or of the securities composing the units;
- whether the units will be issued in fully registered or global form; and
- any other terms of the units.

The applicable provisions described in this section, as well as those described under “Description of Our Capital Stock—Common Stock,” “Description of Our Capital Stock—Preferred Stock” and “Description of Warrants” above, will apply to each unit and to each security included in each unit, respectively.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee, depositary or warrant agent maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in any applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its participants. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers.

who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in "street name." Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depositary will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any applicable trustee or depositary will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the legal holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the legal holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in any applicable prospectus supplement, DTC will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under "Special Situations When a Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities

The rights of an indirect holder relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank, broker or other financial institution for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;

- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in a global security;
- we and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in a global security, nor do we or any applicable trustee supervise the depositary in any way;
- the depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds, and your bank, broker or other financial institution may require you to do so as well; and
- financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When a Global Security Will Be Terminated

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks, brokers or other financial institutions to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

Unless we provide otherwise in any applicable prospectus supplement, the global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by any applicable prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also sell equity securities covered by this registration statement in an "at the market" offering as defined in Rule 415(a)(4) under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price on or through the facilities of the Nasdaq Capital Select or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale.

Such at the market offerings, if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

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We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. These activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any underwriters who are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the securities on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

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LEGAL MATTERS

Gracin & Marlow, LLP, New York, New York will pass upon certain legal matters relating to the issuance and sale of the common stock, preferred stock, warrants and units offered hereby on behalf of Heat Biologics, Inc. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements as of December 31, 2019 and 2018, and for the years then ended, incorporated by reference in this prospectus and the registration statement have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public at the SEC's website at www.sec.gov. Additional information about Heat Biologics, Inc. is contained at our website, www.heatbio.com. Information on our website is not incorporated by reference into this prospectus. We make available on our website our SEC filings as soon as reasonably practicable after those reports are filed with the SEC. The following Corporate Governance documents are also posted on our website: Code of Ethics and the Charters for the Audit Committee, Compensation Committee and Nominating and Governance Committee of the Board of Directors.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-35994. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this document:

- 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 Reports on Form 10-Q for the quarters ended [March 31, 2020](#), [June 30, 2020](#) and [September 30, 2020](#) (Commission File No. 001-35994) filed with the SEC on May 15, 2020, August 7, 2020 and November 9, 2020, respectively;
- Our Current Reports on Form 8-K (Commission File No. 001-35994) filed with the SEC on [January 3, 2020](#), [January 21, 2020](#), [February 5, 2020](#), [February 21, 2020](#), [February 27, 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](#), [April 10, 2020](#), [April 23, 2020](#), [April 28, 2020](#), [April 29, 2020](#), [May 14, 2020](#), [May 29, 2020](#), [June 1, 2020](#), [June 22, 2020](#), [July 27, 2020](#), [July 27, 2020](#), [July 29, 2020](#), [August 24, 2020](#), [August 24, 2020](#), and [November 2, 2020](#);
- Our [Definitive Proxy Statement](#) on Schedule 14A filed with the SEC on July 27, 2020 and our [Definitive Revised 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) as updated by the description of our common stock filed as [Exhibit 4.20](#) to our Annual Report on Form 10-K for the year ended December 31, 2019, including any amendments or reports filed for the purpose of updating such description; and
- The description of our common stock purchase rights set forth in our registration statement on Form 8-A filed with the SEC on [March 12, 2018](#), Form 8-A/A (Amendment No. 1) filed on [March 13, 2019](#), Form 8-A/A (Amendment No. 2) filed with the SEC on [March 13, 2020](#) (Commission File No. 001-35994) as updated by the description of our common stock filed as [Exhibit 4.20](#) to our Annual Report on Form 10-K for the year ended December 31, 2019, including any amendments or reports filed for the purpose of updating such description.

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We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

You may obtain, free of charge, a copy of any of these documents (other than exhibits to these documents unless the exhibits are specifically incorporated by reference into these documents or referred to in this prospectus) by writing or calling us at the following address and telephone number:

Heat Biologics, Inc.
627 Davis Drive, Suite 400
Morrisville, North Carolina 27560
(919) 240-7133
Attention: Corporate Secretary

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.

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Up to \$4,037,193 of Shares of Common Stock

PROSPECTUS SUPPLEMENT

A.G.P.

The date of this prospectus supplement is December 8, 2023