

HEAT BIOLOGICS, INC.
Form S-1/A
October 17, 2017

As filed with the Securities and Exchange Commission on October 17, 2017

Registration No. 333-220470

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 2

TO

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Heat Biologics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

2836

*(Primary Standard Industrial
Classification Code Number)*

26-2844103

*(I.R.S. Employer
Identification Number)*

801 Capitola Drive

Durham, North Carolina 27713

(919) 240-7133

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Jeffrey Wolf

Chief Executive Officer and

Chairman of the Board of Directors

Heat Biologics, Inc.

801 Capitola Drive

Durham, North Carolina 27713

(919) 240-7133

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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

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

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

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

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company and emerging growth company in Rule 12b-2 of the Exchange Act of 1934.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
(Do not check if a smaller reporting company)		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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

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

SUBJECT TO COMPLETION, DATED OCTOBER 17, 2017

PRELIMINARY PROSPECTUS

**Subscription Rights to purchase up to 12,000,000 shares of Common Stock
at a Subscription Price of \$0.62 per share**

Heat Biologics, Inc. is distributing, at no charge, to holders of our common stock and holders of our warrants non-transferable subscription rights to purchase one share of our common stock for each share of common stock owned at, and each share of common stock into which the warrants held by them were exercisable at, 5:00 p.m., New York City time, on October 13, 2017, subject to a pro-rata reduction if the basic subscription rights are exercised for an amount in excess of 12,000,000 shares of common stock. We refer to this as the rights offering.

Each subscription right will entitle the holder to purchase one share of our common stock at a subscription price equal to \$0.62 per share of our common stock, which we refer to as the basic subscription privilege. If you fully exercise your basic subscription privilege and other holders do not fully exercise their basic subscription privileges, you may also exercise an over-subscription privilege to purchase additional shares of common stock that remain unsubscribed at the expiration of the rights offering, subject to the availability and *pro rata* allocation of shares among holders exercising this over-subscription privilege.

We are conducting the rights offering to raise capital that we intend to use 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 complementary businesses, technologies, product candidates or other intellectual property. See Use of Proceeds.

The rights offering commences on the date of this prospectus and subscription rights will expire if they are not exercised by 5:00 p.m., New York City time, on November 8, 2017, unless we extend the rights offering period. There is no minimum number of subscription rights that must be exercised in this rights offering, no minimum number that any subscription rights holder must exercise, and no minimum number of shares of common stock that we will issue at the closing of this rights offering. We have the option to extend the rights offering and the period for exercising your subscription rights for a period not to exceed 30 days, although we do not presently intend to do so. All exercises of subscription rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your subscription rights and even if the rights offering is extended by our board of directors.

Our common stock is listed on the Nasdaq Capital Market under the symbol "HTBX." The last reported sale price of our common stock on October 16, 2017 was \$0.66 per share. The subscription rights will not be listed for trading on the NASDAQ Capital Market or any stock exchange or market. The shares of common stock issued in the rights offering will also be traded on the NASDAQ Capital Market under the same symbol.

Our board of directors may cancel the rights offering at any time prior to the expiration of the rights offering for any reason. In the event the rights offering is cancelled, all subscription payments received by the subscription agent for the rights offering will be promptly returned, without interest.

We have engaged Advisory Group Equity Services, Ltd. doing business as RHK Capital (RHK Capital) as dealer-manager for this offering and placement agent for any unsubscribed shares. See Plan of Distribution.

	Subscription Price	Dealer Manager Fees and Expenses(1)	Proceeds, Before Expenses, to us
Per share (2)	\$ 0.62	\$ 0.0496	\$ 0.5704
Total (2)	\$ 7,440,000	\$ 595,200	\$ 6,844,800

(1)

In connection with the rights offering, we have agreed to pay RHK Capital, the dealer-manager for this offering, a cash fee of 6.0% of the gross proceeds of this offering, a non-accountable expense allowance of 1.8% of the gross proceeds of this offering, and an out-of-pocket accountable expense allowance of 0.2% of the gross proceeds of this offering. For any unsubscribed shares of common stock placed by RHK Capital during the 45-day placement period following the expiration of the rights offering, we have agreed to pay RHK Capital a placement fee equal to 6.0% of such sales, in lieu of the dealer-manager fee, together with a continuing 1.8% non-accountable expense fee and out-of-pocket accountable expense allowance of 0.2% of the gross proceeds of the offering.

(2)

Assumes that the rights offering is fully subscribed and that subscription rights are exercised for 12,000,000 shares at the subscription price of \$0.62 per share.

The exercise of your subscription rights for shares of our common stock involves risks. See Risk Factors beginning on page 15 of this prospectus to read about important factors you should consider before exercising your subscription rights.

We are an emerging growth company as defined under the federal securities laws and are subject to reduced public company reporting requirements. Please read the disclosures in this prospectus for more information.

Neither the Securities and Exchange Commission (the SEC) 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.

If you have any questions or need further information about the rights offering, please call D.F. King & Co., Inc., our information agent for the rights offering, at (866) 796-1290, or by email at htbx@dfking.com.

Dealer-Manager

The date of this prospectus is _____, 2017

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You should rely only on the information contained in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering. Neither we nor the dealer-manager has authorized anyone to provide you with information that is different. We are offering to sell, and seeking offers to buy, the securities covered hereby only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities covered hereby. Our business, financial condition, results of operations and prospects may have changed since that date. We are not, and the dealer-manager is not, making an offer of these securities in any jurisdiction where the offer is not permitted.

For investors outside the United States: Neither we nor the dealer-manager has taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities covered hereby and the distribution of this prospectus outside of the United States.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We believe that the data obtained from these industry publications and third-party research, surveys and studies are reliable. We are ultimately responsible for all disclosure included in this prospectus.

Except where the context requires otherwise, in this prospectus the Company, Heat Biologics, Heat, we, our refer to Heat Biologics, Inc., a Delaware corporation formed in June 2008, and, where appropriate, its subsidiaries, Heat Biologics I, Inc., Heat Biologics III, Inc., Heat Biologics IV, Inc., Heat Biologics GmbH, Heat Biologics Australia Pty LTD and Pelican Therapeutics, Inc.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary is not intended to be complete and does not contain all of the information that you should consider before deciding to invest in our securities. You should read this entire prospectus carefully, especially the Risk Factors section beginning on page 15 and our financial statements and the notes thereto contained in the prospectus, before making an investment decision.

Overview

Heat Biologics is a biopharmaceutical company developing immunotherapies designed to activate a patient's CD8+ Killer T-cells against cancer. Our T-Cell Activation Platform (TCAP) produces therapies designed to turn "cold" tumors "hot" and be administered in combination with checkpoint inhibitor therapies and other immuno-modulators to increase their effectiveness. We can also utilize our TCAP approach to combine with existing T-cell checkpoint inhibitors and co-stimulators in a single treatment. This offers the potential benefit of combination immunotherapy without the need for multiple, independent biologic products. We are currently enrolling patients in our Phase 2 clinical trial for non-small cell lung cancer, in combination with Bristol-Myers Squibb's nivolumab (Opdivo®). We also have numerous pre-clinical programs at various stages of development.

Through our *ImPACT*® platform technology, we have developed product candidates that consist of live, allogeneic *off-the-shelf* genetically-modified, irradiated human cancer cells. These cells are intended to secrete a broad spectrum of Cancer Testis Antigens (CTA), classified as tumor antigens, together with the gp96 protein. Our *ImPACT*® technology achieves this by reprogramming live tumor cells to secrete gp96, along with their chaperoned tumor antigens; thereby, transforming the allogeneic cells into machines that activate a robust killer CD8+ T cell immune attack against a patient's cancer. Unlike autologous or personalized therapeutic, monotherapy approaches that either require the extraction of blood or tumor tissue from each patient or the creation of an individualized treatment, our product candidates are fully allogeneic, and do not require extraction of individual patient's material or custom manufacturing. As a result, our product candidates can be mass-produced and readily available for immediate patient use. Because each patient receives the same treatment, we believe that our immunotherapy approach offers logistical, manufacturing and other cost benefits, compared to patient-specific or precision medicine approaches.

Our lead *ImPACT*[®] program, HS-110, is in a Phase 2 clinical trial focused on non-small cell lung cancer in combination with Bristol-Myers Squibb's nivolumab (Opdivo[®]). HS-110 is made of a cancer cell line that has been genetically modified using our *ImPACT* technology system. It is designed to secrete a wide range of lung cancer-associated antigens bound to gp96 proteins, while activating a broad, T cell mediated immune response against the patient's cancer.

Our *ComPACT* platform technology, currently in preclinical development, is a dual-acting immunotherapy, combining a pan-antigen T-cell activator and a T-cell co-stimulator in a single product, offering the potential benefits of combination immunotherapy without the need for multiple, independent biologic products. The platform offers broad versatility and has been engineered to incorporate into the gp96-Ig expression vector and various fusion proteins targeting co-stimulatory receptors, including but not limited to, OX40, ICOS, GITR and TLIA.

In May, we acquired two T cell co-stimulators through our acquisition of 80% of the outstanding equity of Pelican Therapeutics, Inc. (Pelican), broadening our pipeline and strengthening our portfolio in the emerging T-cell activation space. We believe the use of these therapeutic agents, in combination with other immunotherapies, have the potential dramatically improve patient outcomes.

Pelican is the only company with a disclosed preclinical pipeline targeting the T-cell co-stimulator, TNFRSF25. We believe PTX-35 can activate memory CD8+ cytotoxic T-cells and eliminate tumor cells in patients. This solution is designed to harness the body's natural tolerance mechanisms to reprogram the immune system and provide a long-term, durable effect after a short course of therapy. Combined with other immunotherapies, including *ImPACT* and *ComPACT*, PTX-35 could boost anti-cancer responses due to its potential to improve the durability of antigen-specific immune responses and a preferential specificity for stimulating the production of memory CD8+ t cells. In May 2016, a \$15.2 million grant was awarded to Pelican from the Cancer Prevention and Research Institute of Texas (CPRIT) to support further development of PTX-35 and examine the benefits it may provide to patients with several types of cancers, such as lung, lymphoma, prostate, pancreatic and ovarian.

PTX-15, Pelican's second product candidate, is a human TL1A-Ig fusion protein designed to trigger regulatory T-cell proliferation. We believe it can provide precise control of the regulatory arm of our immune system, and can be used in immuno-oncology or to prevent inflammation in autoimmune diseases and transplantation. As both Pelican therapies are based on natural, existing components of the immune system, we expect they will be safer, longer-lasting, and more effective than traditional medicines after only a short course of therapy.

Our wholly-owned subsidiary, Zolovax, Inc. (Zolovax), is in preclinical studies to develop therapeutic and preventative medicines to treat infectious diseases based on our gp96 therapeutic technology, with a current focus on the development of a Zika vaccine in collaboration with the University of Miami. Other infectious diseases of interest include HIV, West Nile virus, and Dengue and yellow fever.

General Corporate Information

We were incorporated under the laws of the State of Delaware on June 10, 2008. Our principal offices are located at 801 Capitola Drive, Bay 12, Durham, North Carolina 27713. 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.

Implications of Being an Emerging Growth Company

We qualify as an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). As an emerging growth company, we intend to take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

.
allowance to provide only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;

·
reduced disclosure about our executive compensation arrangements;

·
no non-binding advisory votes on executive compensation or golden parachute arrangements; and

·
exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these provisions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of: (i) the last day of the fiscal year in which we have total annual gross revenues of \$1 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of our initial public offering; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you have beneficial ownership.

THE RIGHTS OFFERING

*The following summary describes the principal terms of the rights offering, but is not intended to be complete. See the information under the heading *The Rights Offering* in this prospectus for a more detailed description of the terms and conditions of the rights offering.*

Securities Offered

We are distributing, at no charge, to holders of our common stock and holders of our warrants on the record date non-transferrable subscription rights to purchase up to an aggregate of 12,000,000 shares of our common stock. Subject to proration as described below, holders of our common stock will receive one subscription right for each share of common stock owned at, and our warrant holders will receive one subscription right for each share of common stock into which the warrants held by them were exercisable at, 5:00 p.m., New York City time, on October 13, 2017. The subscription rights may be exercised at any time beginning on the date of this prospectus.

Basic Subscription Privilege

Subject to proration, the basic subscription privilege of each subscription right will entitle you to purchase one share of our common stock at a subscription price of \$0.62.

Proration

All subscriptions, including subscriptions pursuant to the basic subscription privilege, are subject to proration. If the basic subscription rights are exercised for an amount in excess of 12,000,000 shares of common stock, the basic subscription rights that have been exercised will be reduced on a pro-rata basis based on the number of shares each rights holder subscribed for under the basic subscription right, subject to adjustment to eliminate fractional shares, so that the total number of shares issued upon exercise of subscription rights shall equal 12,000,000 shares, and any excess subscription amount received by the subscription agent will be returned, without interest, as soon as practicable after the rights offering has expired and all prorating calculations and reductions contemplated by the terms of the rights offering have been effected.

Over-Subscription Privilege

If you fully exercise your basic subscription privilege and other stockholders do not fully exercise their basic subscription privileges, you may also exercise an over-subscription privilege to purchase additional shares of common stock that remain unsubscribed at the expiration of the rights offering, subject to the availability and pro rata allocation of shares among stockholders exercising this over-subscription privilege. To the extent the number of the unsubscribed shares are not sufficient to satisfy all of the properly exercised over-subscription privileges requests, then the available shares will be prorated among those who properly exercised over-subscription privileges based on the number of shares each rights holder subscribed for under the basic subscription right. If this pro rata allocation results in any stockholder receiving a greater number of shares of common stock than the stockholder subscribed for pursuant to the exercise of the over-subscription privilege, then such stockholder will be allocated only that number of shares for which the stockholder oversubscribed, and the remaining shares of common stock will be allocated among all other stockholders exercising the over-subscription privilege on the same pro rata basis described above. The proration process will be repeated until all shares of common stock have been allocated or all over-subscription exercises have been fulfilled, whichever occurs earlier.

Limitations on Exercise

Unless we otherwise agree in writing, a person or entity, together with related persons or entities, may not exercise subscription rights (including over-subscription privileges) to purchase shares of our common stock that, when aggregated with their existing ownership, would result in such person or entity, together with any related persons or entities, owning in excess of twenty percent (20%) of our issued and outstanding shares of common stock following the closing of the transactions contemplated by this rights offering.

In the event that the exercise by a stockholder of the basic subscription privilege or the over-subscription privilege could, as determined by the Company in its sole discretion, potentially result in a limitation on the Company's ability to use the Tax Attributes under the Code and rules promulgated by the IRS, the Company may, but is under no obligation to, reduce the exercise by such stockholder of the basic subscription privilege or the over-subscription privilege to such number of shares of common stock as the Company, in its sole discretion, shall determine to be advisable in order to preserve the Company's ability to use the Tax Attributes.

Record Date

5:00 p.m., New York City time, on October 13, 2017

Expiration Date of the Rights Offering 5:00 p.m., New York City time, on November 8, 2017

Subscription Price

The per share subscription price will be \$0.62. To be effective, any payment related to the exercise of a right must clear prior to the expiration of the rights offering.

Use of Proceeds

We are conducting the rights offering to raise capital that we intend to use 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 complementary businesses, technologies, product candidates or other intellectual property. See Use of Proceeds.

Non-Transferability of Rights

The subscription rights may not be sold, transferred or assigned and will not be listed for trading on the NASDAQ Capital Market or any stock exchange or market.

No Board Recommendation

Although members of our board of directors may invest their own money in the rights offering, our board of directors is making no recommendation regarding your exercise of the subscription rights. You are urged to make your decision based on your own assessment of our business and the rights offering. Please see Risk Factors for a discussion of some of the risks involved in investing in our common stock.

No Revocation

All exercises of subscription rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your subscription rights and even if the rights offering is extended by our board of directors. However, if we amend the rights offering to allow for an extension of the rights offering for a period of more than 30 days or make a fundamental change to the terms of the rights offering set forth in this prospectus, you may cancel your subscription and receive a refund of any money you have advanced. You should not exercise your subscription rights unless you are certain that you wish to purchase additional shares of our common stock at a subscription price of \$0.62 per share.

No Minimum Requirements

There is no minimum purchase requirement for closing this offering, and no minimum purchase requirement for any subscription rights holder.

U.S. Federal Income Tax Considerations

For U.S. federal income tax purposes holders of shares of our common stock and holders of warrants to acquire our common stock generally should not recognize income or loss in connection with the receipt or exercise of subscription rights unless, by way of example only, the rights offering is part of a disproportionate distribution within the meaning of applicable tax rules (in which case you may recognize taxable income upon receipt of the subscription rights). We believe that the rights offering should not be treated as part of a disproportionate distribution, but that conclusion is unclear and is not binding on the IRS or the courts. You are urged to consult your own tax advisor as to your particular tax consequences resulting from the receipt and exercise of subscription rights and the receipt, ownership and disposition of our common stock. For further information, please see Material U.S. Federal Income Tax

Considerations.

**Extension, Cancellation and
Amendment**

We have the option to extend the expiration of the rights offering for a period not to exceed 30 days by giving oral or written notice to the subscription agent prior to the expiration date of the rights offering, although we do not presently intend to do so. If we elect to extend the expiration of the rights offering, we will issue a press release announcing such extension no later than 9:00 a.m., New York City time, on the next business day after the most recently announced expiration time of the rights offering. We will extend the duration of the rights offering as required by applicable law or regulation and may choose to extend it if we decide to give investors more time to exercise their subscription rights in the rights offering.

Our board of directors may cancel the rights offering at any time prior to the expiration of the rights offering for any reason. In the event the rights offering is cancelled, all subscription payments received by the subscription agent for the rights offering will be promptly returned, without interest.

Our board of directors also reserves the right to amend or modify the terms of the rights offering in its sole discretion. If we should make any fundamental changes to the terms of the rights offering set forth in this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included, offer potential purchasers who have subscribed for rights the opportunity to cancel such subscriptions and issue a refund of any money advanced by such stockholder and recirculate an updated prospectus after the post-effective amendment is declared effective by the SEC. In addition, upon such event, we may extend the expiration date of the rights offering to allow holders of rights ample time to make new investment decisions and for us to recirculate updated documentation. Promptly following any such occurrence, we will issue a press release announcing any changes with respect to the rights offering and the new expiration date. The terms of the rights offering cannot be modified or amended after the expiration date of the rights offering. Although we do not presently intend to do so, we may choose to amend or modify the terms of the rights offering for any reason, including, without limitation, in order to increase participation in the rights offering. Such amendments or modifications may include a change in the subscription price, although no such change is presently contemplated.

Procedures for Exercise

To exercise your subscription rights, you must complete the rights certificate and deliver it to the subscription agent, Continental Stock Transfer & Trust Company, together with full payment for all the subscription rights you elect to exercise under the basic subscription privilege and over-subscription privilege. You may deliver the documents and payments by regular mail or commercial carrier. If regular mail is used for this purpose, we recommend using registered mail, properly insured, with return receipt requested.

If you cannot deliver your rights certificate to the subscription agent prior to the expiration of the rights offering, you may follow the guaranteed delivery procedures described under [The Rights Offering](#) [Guaranteed Delivery Procedures](#).

Transfer Agent Serving as Subscription Agent Continental Stock Transfer & Trust Company

Information Agent D.F. King & Co., Inc.

Dealer-Manager and Placement Agent We have engaged Advisory Group Equity Services, Ltd. doing business as RHK Capital ([RHK Capital](#)) as the dealer-manager for this rights offering and placement agent for any unsubscribed shares of our common stock.

Shares Outstanding Before the Rights Offering 35,788,912 shares of our common stock⁽¹⁾

Shares Outstanding After the Rights Offering Assuming 12,000,000 shares of our common stock are issued in the rights offering through the exercise of subscription rights, we anticipate that 47,788,912 shares of our common stock will be outstanding following the completion of the rights offering. ⁽¹⁾

Risk Factors See [Risk Factors](#) beginning on page 15 to read about factors you should consider before you decide whether to exercise your subscription rights to purchase shares of our common stock.

Fees and Expenses We will pay all fees charged by the subscription agent and the information agent in connection with this rights offering. We will also pay the fees and expenses charged by RHK Capital, as dealer-manager for this rights offering, as well as placement agent for any unsubscribed shares of common stock. You are responsible for paying any other commissions, fees, taxes or other expenses incurred in connection with the exercise of the subscription rights.

Distribution Arrangements

RHK Capital will act as dealer-manager for the rights offering. In such capacity, RHK Capital will provide marketing assistance and advice to our company in connection with the rights offering. Under the terms and subject to the conditions contained in the dealer-manager agreement, we have agreed to pay RHK Capital a cash fee of 6.0% of the gross proceeds of this offering, a non-accountable expense allowance up to 1.8% of the gross proceeds of the rights offering, and an out-of-pocket accountable expense allowance of 0.2% of the gross proceeds of this offering. RHK Capital will also act as placement agent for any unsubscribed shares of our common stock during the 45-day placement period following the expiration of the rights offering. We have agreed to pay RHK Capital a placement fee equal to 6.0% of such sales, in lieu of the dealer-manager fee, together with a continuing 1.8% non-accountable expense fee and out-of-pocket accountable expense allowance of 0.2% of the gross proceeds of the offering, with such placement fee and expenses not to exceed the aggregate amounts that would have been otherwise received by RHK Capital if the rights offering were to have been fully subscribed. We have agreed to indemnify RHK Capital and its affiliates against, or contribute to any losses arising out of, certain liabilities arising under the Securities Act of 1933, as amended (the Securities Act). RHK Capital's participation in this offering is subject to customary conditions contained in the dealer-manager agreement. The dealer-manager agreement also provides that the dealer-manager will not be subject to any liability to us in rendering the services contemplated by the dealer-manager agreement except for any act of bad faith or gross negligence of the dealer-manager. RHK Capital and its affiliates may provide to us from time to time in the future in the ordinary course of their business certain financial advisory, investment banking and other services for which they will be entitled to receive customary fees. RHK Capital does not make any recommendation with respect to whether you should exercise the basic subscription or over-subscription privileges or to otherwise invest in our company.

Payments to Broker-Dealers and Other Intermediaries

The dealer-manager, RHK Capital, has informed us that it has entered into or intends to enter into selected dealer agreements with other broker-dealers pursuant to which it will re-allow 4.0% of its dealer-manager fee to each broker-dealer whose clients purchase shares of common stock in this offering pursuant to their subscription rights. See Plan of Distribution.

NASDAQ Capital Market Trading Symbol for Our Common Stock

Shares of our common stock are traded on the NASDAQ Capital Market under the symbol HTBX. The shares of common stock issued in the rights offering will also be traded on the NASDAQ Capital Market under the same symbol.

Questions

If you have any questions or need further information about this rights offering, please call D.F. King & Co., Inc., our information agent for this

rights offering, at (866) 796-1290 (toll free) or htbx@dfking.com.

(1)

Based upon the total number of issued and outstanding shares as of September 13, 2017, but does not include, as of that date:

- 3,103,963 shares of common stock reserved for issuance upon the exercise of outstanding warrants with a weighted average exercise price of \$1.46 per share;
- 2,663,549 shares of common stock reserved for issuance upon the exercise of outstanding stock options with a weighted average exercise price of \$2.04 per share; and
- 5,482,184 shares of common stock available for future grant under our equity incentive plans.

QUESTIONS AND ANSWERS ABOUT THE RIGHTS OFFERING

What is the rights offering?

We are distributing to holders of our common stock and holders of our warrants, at no charge, non-transferable subscription rights to purchase shares of our common stock. Our stockholders will receive one subscription right for each share of common stock owned at, and our warrant holders will receive one subscription right for each share of common stock into which the warrants held by them were exercisable at, 5:00 p.m., New York City time, on October 13, 2017; provided that the rights may only be exercised for a maximum of 12,000,000 shares of common stock, subject to proration. The subscription rights will be evidenced by rights certificates. Each subscription right will entitle the holder to a basic subscription privilege and an over-subscription privilege.

What is the basic subscription privilege?

Subject to proration, the basic subscription privilege of each subscription right gives holders the opportunity to purchase one share of our common stock at a subscription price of \$0.62. You may exercise the basic subscription privilege of any number of your subscription rights, or you may choose not to exercise any subscription rights.

If the basic subscription rights are exercised for an amount in excess of 12,000,000 shares of common stock, the basic subscription rights that have been exercised will be reduced on a pro-rata basis, subject to adjustment to eliminate fractional shares, so that the total number of shares issued upon exercise of subscription rights equal 12,000,000 shares, and any excess subscription amount received by the subscription agent will be promptly returned, without interest, after the rights offering has expired and all prorating calculations and reductions contemplated by the terms of the rights offering have been effected.

What is the over-subscription privilege?

We do not expect all of our stockholders to exercise all of their basic subscription privileges. The over-subscription privilege provides stockholders that exercise all of their basic subscription privileges the opportunity to purchase the shares that are not purchased by other stockholders. If you fully exercise your basic subscription privilege and basic subscription rights are exercised for an amount less than 12,000,000 shares of common stock, you may also exercise an over-subscription privilege to purchase additional shares of common stock that remain unsubscribed at the expiration of the rights offering, subject to the availability and *pro rata* allocation of shares among stockholders

exercising this over-subscription privilege. To the extent the number of the unsubscribed shares are not sufficient to satisfy all of the properly exercised over-subscription privileges requests, then the available shares will be prorated among those who properly exercised over-subscription privileges based on the number of shares each rights holder subscribed for under the basic subscription right. If this *pro rata* allocation results in any stockholder receiving a greater number of shares of common stock than the stockholder subscribed for pursuant to the exercise of the over-subscription privilege, then such stockholder will be allocated only that number of shares for which the stockholder oversubscribed, and the remaining shares of common stock will be allocated among all other stockholders exercising the over-subscription privilege on the same *pro rata* basis described above. The proration process will be repeated until all shares of common stock have been allocated or all over-subscription exercises have been fulfilled, whichever occurs earlier.

In order to properly exercise your over-subscription privilege, you must deliver the subscription payment related to your over-subscription privilege prior to the expiration of the rights offering. Because we will not know the total number of unsubscribed shares prior to the expiration of the rights offering, if you wish to maximize the number of shares you purchase pursuant to your over-subscription privilege, you will need to deliver payment in an amount equal to the aggregate subscription price for the maximum number of shares of our common stock available to you, assuming that no stockholder other than you has purchased any shares of our common stock pursuant to their basic subscription privilege and over-subscription privilege. See [The Rights Offering](#) [The Subscription Rights](#) [Over-Subscription Privilege](#).

Fractional shares of our common stock resulting from the exercise of the over-subscription privilege will be eliminated by rounding down to the nearest whole share, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the subscription agent will be promptly returned, without interest.

What are the limitations on the exercise of the basic subscription privilege and over-subscription privilege?

Unless we otherwise agree in writing, a person or entity, together with related persons or entities, may not exercise subscription rights (including over-subscription privileges) to purchase shares of our common stock that, when aggregated with their existing ownership, would result in such person or entity, together with any related persons or entities, owning in excess of twenty percent (20%) of our issued and outstanding shares of common stock following the closing of the transactions contemplated by this rights offering.

In the event that the exercise by a stockholder of the basic subscription privilege or the over-subscription privilege could, as determined by the Company in its sole discretion, potentially result in a limitation on the Company's ability to use the Tax Attributes under the Code and rules promulgated by the IRS, the Company may, but is under no obligation to, reduce the exercise by such stockholder of the basic subscription privilege or the over-subscription privilege to such number of shares of common stock as the Company, in its sole discretion, shall determine to be advisable in order to preserve the Company's ability to use the Tax Attributes.

Why are we conducting the rights offering?

We are conducting the rights offering to raise capital that we intend to use 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 complementary businesses, technologies, product candidates or other intellectual property. See Use of Proceeds. We believe that the rights offering will strengthen our financial condition by generating additional cash and increasing our stockholders' equity.

How was the per share subscription price determined?

In determining the subscription price, our board of directors considered a number of factors, including: the likely cost of capital from other sources, the price at which our stockholders might be willing to participate in the rights offering, historical and current trading prices of our common stock, our need for liquidity and capital and the desire to provide an opportunity to our stockholders to participate in the rights offering on a *pro rata* basis. In conjunction with its review of these factors, our board of directors also reviewed a range of discounts to market value represented by the subscription prices in various prior rights offerings of public companies. The subscription price is not necessarily related to our book value, net worth or any other established criteria of value and may or may not be considered the fair value of our common stock to be offered in the rights offering. We cannot give any assurance that our common stock will trade at or above the subscription price in any given time period.

Am I required to exercise all of the subscription rights I receive in the rights offering?

No. You may exercise any number of your subscription rights, or you may choose not to exercise any subscription rights. However, if you choose not to exercise your subscription rights in full, the relative percentage of our common stock that you own will decrease, and your voting and other rights will be diluted. In addition, if you do not exercise your basic subscription privilege in full, you will not be entitled to participate in the over-subscription privilege.

How soon must I act to exercise my subscription rights?

The subscription rights may be exercised at any time beginning on the date of this prospectus and prior to the expiration of the rights offering, which is 5:00 p.m., New York City time, on November 8, 2017. If you elect to exercise any rights, the subscription agent must actually receive all required documents and payments from you prior to the expiration of the rights offering. Although we have the option of extending the expiration of the rights offering for a period not to exceed 30 days, we currently do not intend to do so.

May I transfer my subscription rights?

No. You may not sell or transfer your subscription rights to anyone.

Are we requiring a minimum subscription to complete the rights offering?

No.

Are there any conditions to completing the rights offering?

No (other than this registration statement being declared effective by the SEC).

Can our board of directors extend, cancel or amend the rights offering?

We have the option to extend the expiration of the rights offering for a period not to exceed 30 days by giving oral or written notice to the subscription agent prior to the expiration date of the rights offering, although we do not presently intend to do so. If we elect to extend the expiration of the rights offering, we will issue a press release announcing such extension no later than 9:00 a.m., New York City time, on the next business day after the most recently announced expiration time of the rights offering. We will extend the duration of the rights offering as required by applicable law or regulation and may choose to extend it if we decide to give investors more time to exercise their subscription rights in the rights offering. An extension in the offering termination date for up to 30 days will not constitute a fundamental change to the terms of the offering, and will not give persons who have exercised their subscription rights the opportunity to cancel their subscriptions.

Our board of directors may cancel the rights offering at any time prior to the expiration of the rights offering for any reason. In the event the rights offering is cancelled, all subscription payments received by the subscription agent for the rights offering will be promptly returned, without interest.

Our board of directors also reserves the right to amend or modify the terms of the rights offering in its sole discretion. If we should make any fundamental changes to the terms of the rights offering set forth in this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included, offer potential purchasers who have subscribed for rights the opportunity to cancel such subscriptions and issue a refund of any money advanced by such stockholder and recirculate an updated prospectus after the post-effective amendment is declared effective by the SEC. In addition, upon such event, we may extend the expiration date of the rights offering to allow holders of rights ample time to make new investment decisions and for us to recirculate updated documentation. Promptly following any such occurrence, we will issue a press release announcing any changes with respect to the rights offering and the new expiration date. The terms of the rights offering cannot be modified or

amended after the expiration date of the rights offering. Although we do not presently intend to do so, we may choose to amend or modify the terms of the rights offering for any reason, including, without limitation, in order to increase participation in the rights offering. Such amendments or modifications may include a change in the subscription price, although no such change is presently contemplated.

Has our board of directors made a recommendation to our stockholders regarding the rights offering?

Neither our board of directors nor the dealer-manager is making any recommendation to stockholders regarding the exercise of rights in the rights offering. You should make an independent investment decision about whether or not to exercise your rights. Stockholders who exercise subscription rights risk investment loss on new money invested. We cannot assure you that the market price for our common stock will remain above the subscription price or that anyone purchasing shares at the subscription price will be able to sell those shares in the future at the same price or a higher price. If you do not exercise your rights, you will lose any value represented by your rights and your percentage ownership interest in us will be diluted. Please see **Risk Factors** for a discussion of some of the risks involved in investing in our common stock.

What will happen if I choose not to exercise my subscription rights?

If you do not exercise any subscription rights, the number of shares of our common stock you own will not change; however, due to the fact that shares of common stock may be purchased by other stockholders in the rights offering, your percentage ownership in the Company after the completion of the rights offering will be diluted.

How do I exercise my subscription rights? What forms and payment are required to purchase the shares of our common stock?

If you wish to participate in the rights offering, you must take the following steps:

- (i) deliver payment to the subscription agent using the methods outlined in this prospectus before 5:00 p.m., New York City time, on November 8, 2017; and
- (ii) deliver a properly completed rights certificate to the subscription agent before 5:00 p.m., New York City time, on November 8, 2017.

If you cannot deliver your rights certificate to the subscription agent prior to the expiration of the rights offering, you may follow the guaranteed delivery procedures described under **The Rights Offering Guaranteed Delivery Procedures**.

If you send a payment that is insufficient to purchase the number of shares you requested, or if the number of shares you requested is not specified in the forms, the payment received will be applied to exercise your subscription rights to the full extent possible based on the amount of the payment received, subject to the elimination of fractional shares.

When will I receive my new shares?

If you purchase shares of our common stock through the rights offering, you will receive your new shares as soon as practicable after the closing of the offering.

After I send in my payment and rights certificate, may I cancel my exercise of subscription rights?

No. All exercises of subscription rights are irrevocable, even if you later learn information that you consider to be unfavorable to the exercise of your subscription rights and even if the rights offering is extended by our board of directors. However, if we amend the rights offering to allow for an extension of the rights offering for a period of more than 30 days or make a fundamental change to the terms of the rights offering set forth in this prospectus, you may cancel your subscription and receive a refund of any money you have advanced. You should not exercise your subscription rights unless you are certain that you wish to purchase additional shares of our common stock at the

subscription price of \$0.62 per share.

What should I do if I want to participate in the rights offering but my shares are held in the name of my broker, dealer, custodian bank or other nominee?

If you hold your shares of our common stock or our warrants in the name of a broker, dealer, custodian bank or other nominee, then your broker, dealer, custodian bank or other nominee is the record holder of the shares or warrants you own. The record holder must exercise the subscription rights on your behalf for the shares of our common stock you wish to purchase.

If you wish to participate in the rights offering and purchase shares of our common stock, please promptly contact the record holder of your shares. We will ask your broker, dealer, custodian bank or other nominee to notify you of the rights offering. You should complete and return to your record holder the form entitled Beneficial Owner Election Form. You should receive this form from your record holder with the other rights offering materials.

How many shares of our common stock will be outstanding after the rights offering?

Assuming 12,000,000 shares of our common stock are issued in the rights offering through the exercise of subscription rights, we anticipate that 47,788,912 shares of our common stock will be outstanding following the completion of the rights offering.

How much proceeds will the Company receive from the rights offering?

Assuming full participation of 12,000,000 shares in the rights offering, we estimate that the net proceeds from the rights offering will be approximately \$6.6 million, after deducting expenses related to this offering payable by us estimated at approximately \$0.8 million, including dealer-manager fees. Please see Use of Proceeds.

Are there risks in exercising my subscription rights?

Yes. The exercise of your subscription rights involves risks. Exercising your subscription rights involves the purchase of additional shares of our common stock and should be considered as carefully as you would consider any other equity investment. Among other things, you should carefully consider the risks described under the headings Risk Factors in this prospectus.

May stockholders and warrant holders in all states participate in the rights offering?

Although we intend to distribute the rights to all stockholders and holders of our warrants, we reserve the right in some states to require such holders, if they wish to participate, to state and agree upon exercise of their respective rights that they are acquiring the shares for investment purposes only, and that they have no present intention to resell or transfer any shares acquired. Our securities are not being offered in any jurisdiction where the offer is not permitted under applicable local laws.

If the rights offering is not completed, will my subscription payment be refunded to me?

Yes. The subscription agent will hold all funds it receives in a segregated bank account until completion of the rights offering. If the rights offering is not completed, all subscription payments received by the subscription agent will be promptly returned, without interest. If you own shares in street name, it may take longer for you to receive payment because the subscription agent will return payments through the record holder of your shares.

Will the subscription rights be listed on a stock exchange or national market?

The subscription rights may not be sold, transferred or assigned and will not be listed for trading on the NASDAQ Capital Market or any stock exchange or market. However, the shares of common stock issued in the rights offering will be traded on the NASDAQ Capital Market under the symbol HTBX.

How do I exercise my subscription rights if I live outside the United States?

We will not mail this prospectus or the rights certificates to stockholders whose addresses are outside the United States or who have an army post office or foreign post office address. The subscription agent will hold the rights certificates for their account. To exercise subscription rights, our foreign stockholders must notify the subscription agent and timely follow the procedures described in The Rights Offering Foreign Stockholders.

What fees or charges apply if I purchase shares of our common stock?

We are not charging any fee or sales commission to issue subscription rights to you or to issue shares to you if you exercise your subscription rights. If you exercise your subscription rights through the record holder of your shares, you are responsible for paying any fees your record holder may charge you.

What are the U.S. federal income tax consequences of receipt of or exercise of subscription rights?

For U.S. federal income tax purposes, you generally should not recognize income or loss in connection with the receipt or exercise of subscription rights unless, by way of example only, the rights offering is part of a disproportionate distribution within the meaning of applicable tax rules (in which case you may recognize taxable income upon receipt of the subscription rights). We believe that the rights offering should not be treated as part of a disproportionate distribution, but that conclusion is unclear and is not binding on the IRS or the courts. You are urged to consult your own tax advisor as to your particular tax consequences resulting from the receipt and exercise of subscription rights and the receipt, ownership and disposition of our common stock. For further information, please see Material U.S. Federal Income Tax Considerations.

To whom should I send my forms and payment?

If your shares are held in the name of a broker, dealer or other nominee, then you should send your subscription documents, rights certificate, notices of guaranteed delivery and subscription payment to that record holder. If you are the record holder, then you should send your subscription documents, rights certificate, notices of guaranteed delivery and subscription payment by hand delivery, first class mail or courier service to:

Continental Stock Transfer & Trust Company
Attn: Corporate Actions Department
1 State Street, 30th Floor
New York, New York 10004

You are solely responsible for completing delivery to the subscription agent of your subscription documents, rights certificate and payment. We urge you to allow sufficient time for delivery of your subscription materials to the subscription agent.

Whom should I contact if I have other questions?

If you have other questions or need assistance, please contact the information agent, D.F. King & Co., Inc., at (866) 796-1290 (toll free) or htbx@dfking.com.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained or incorporated by reference in this prospectus, including our consolidated financial statements and the related notes, before making a decision to invest in our securities or to exercise your subscription rights to purchase shares of our common stock. You should also consider the risks, uncertainties and assumptions discussed under Item 1A, Risk Factors, in Part I of our Annual Report on Form 10-K for the year ended December 31, 2016 and Item 1A, Risk Factors, in Part II of our Quarterly Reports on Form 10-Q for the periods ended March 31, 2017 and June 30, 2017, respectively, and any updates or other risks contained in other filings that we may make with the SEC after the date of this prospectus, all of which are incorporated herein by reference, and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any additional prospectus supplement. If any of these risks actually occur, our business, results of operations and financial condition could suffer. In that case, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to this Rights Offering

Your ownership interest in our company may be diluted as a result of the rights offering.

Common stockholders who do not fully exercise their respective subscription rights should expect that they will, at the completion of the rights offering, own a smaller proportional interest in our company than would otherwise be the case had they fully exercised their basic subscription rights.

The market price of our common stock is volatile and may decline before or after the subscription rights expire.

The market price of our common stock could be subject to wide fluctuations in response to numerous factors, some of which are beyond our control. These factors include, among other things, actual or anticipated variations in our costs of doing business, operating results and cash flow, the nature and content of our earnings releases and our competitors earnings releases, customers, compet