

PROSPECTUS SUPPLEMENT
(To the Prospectus Supplements Dated February 3, 2017 and the Prospectus dated October 23, 2014)



Up to \$4,487,051 of Shares of Common Stock

This Prospectus Supplement amends and supplements the information in our prospectus, dated October 23, 2014 (File No. 333-199274) (the “Prospectus”) and the shelf registration statement on Form S-3 of which the Prospectus is a part (the “Registration Statement”), and our Prospectus Supplement, dated February 3, 2017 (the “February 2017 Prospectus Supplement”), filed under the Registration Statement for the offer and sale of up to \$17,500,000 of shares of common stock under the Sales Agreement (as defined below). This Prospectus Supplement should be read in conjunction with the Prospectus and the February 2017 Prospectus Supplement, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Prospectus or the February 2017 Prospectus Supplement. This Prospectus Supplement is not complete without, and may only be delivered or utilized in connection with, the Prospectus and the February 2017 Prospectus Supplement, and any future amendments or supplements thereto.

On March 31, 2017, the date we filed our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, our Prospectus became subject to the offering limits in General Instruction I.B.6 of Form S-3. At that time and as of the date of this Prospectus Supplement, the aggregate market value of our common stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 is \$33,208,450, which was calculated based on 32,241,214 shares of our common stock outstanding held by non-affiliates and a price of \$1.03 per share, the closing price of our common stock on March 22, 2017, which is the highest closing sale price of our common stock on The NASDAQ Capital Market within the prior 60 days. As of the date of this Prospectus Supplement, we have offered and sold common stock with an aggregate sales price of \$6,582,432 pursuant to General Instruction I.B.6 to Form S-3 during the prior 12 calendar month period that ends on and includes the date hereof.

We filed the February 2017 Prospectus Supplement on February 3, 2017 to register the offer and sale of up to \$17,500,000 shares of our common stock from time to time pursuant to the terms of an At Market Issuance Sales Agreement (the “Sales Agreement”) with FBR Capital Markets & Co. (“FBR”). Through the date hereof, we have sold shares of our common stock through FBR under the Sales Agreement for an aggregate purchase price of \$6,582,432. We are filing this Prospectus Supplement to amend the February 2017 Prospectus Supplement to update the dollar amount of shares that we are eligible to sell under General Instruction I.B.6. As a result of these limitations and the current public float of our common stock, and in accordance with the terms of the Sales Agreement, we may offer and sell additional shares of our common stock having an aggregate offering price of up to \$4,487,051 (which is based on \$11,069,483 (one-third of \$33,208,450) less \$6,582,432) from time to time through FBR. If our public float increases such that we may sell additional amounts under the Sales Agreement and the Registration Statement and Prospectus of which this Prospectus Supplement and the February 2017 Prospectus Supplement are a part, we will file another prospectus supplement prior to making additional sale.

Our common stock is listed on the NASDAQ Capital Market under the symbol “HTBX.” The last reported sale price of our common stock on the NASDAQ Capital Market on April 27, 2017 was \$0.77 per share.

Sales of our common stock, if any, under this prospectus supplement will be made by any method permitted that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act of 1933, as amended (the “Securities Act”), including sales made directly on or through the NASDAQ Capital Market, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices, and/or any other method permitted by law. FBR is not required to sell any specific amount, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

FBR will be entitled to compensation at a commission rate equal to up to 3.0% of the gross sales price per share sold. In connection with the sale of the common stock on our behalf, FBR may be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of FBR may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to FBR with respect to certain liabilities, including liabilities under the Securities Act.

We are an “emerging growth company” as that term is used in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) and, as such, have elected to comply with certain reduced public company reporting requirements. See “Prospectus Summary—Implications of Being an Emerging Growth Company.”

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-6 of the February 2017 Prospectus Supplement and in the documents incorporated by reference into the February 2017 Prospectus Supplement and the accompanying 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 supplement or the accompanying base prospectus. Any representation to the contrary is a criminal offense.

FBR

The date of this prospectus supplement is April 28, 2017.

PLAN OF DISTRIBUTION

We entered into the Sales Agreement with FBR, dated August 15, 2016, under which we may issue and sell our common stock under this prospectus supplement from time to time through FBR acting as sales agent, subject to certain limitations, including the number of shares registered under the registration statement to which this offering relates. Currently, the offer and sale of shares of our common stock is limited pursuant to General Instruction I.B.6 of Form S-3. As a result of these limitations and the current public float of our common stock, and in accordance with the terms of the Sales Agreement, we may offer and sell additional shares of our common stock having an aggregate offering price of up to \$4,487,051.

The sales, if any, of shares made under the Sales Agreement and this prospectus supplement will be made by any method that is deemed an “at the market offering” as defined in Rule 415 promulgated under the Securities Act, including sales made directly on or through the NASDAQ Capital Market, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices, and/or any other method permitted by law. We may instruct FBR not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or FBR may suspend the offering of common stock upon notice and subject to other conditions.

FBR will offer our common stock subject to the terms and conditions of the Sales Agreement as agreed upon by us and FBR. Each time we wish to issue and sell common stock under the Sales Agreement, we will notify FBR of the number of shares to be issued, the time period during which such sales are requested to be made, any limitation on the number of shares that may be sold in one day, any minimum price below which sales may not be made and other sales parameters as we deem appropriate. Once we have so instructed FBR, unless FBR declines to accept the terms of the notice, FBR has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of FBR under the Sales Agreement to sell our common stock are subject to a number of conditions that we must meet.

We will pay FBR commissions for its services in acting as agent in the sale of common stock. FBR will be paid a commission in an amount up to 3.0% of the gross sales price per share sold. FBR may also receive customary brokerage commissions from purchasers of the common stock in compliance with FINRA Rule 2121. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse FBR for certain specified expenses in connection with this offering, including the fees and disbursements of its legal counsel in an amount not to exceed \$15,000. We estimate that the total expenses for this offering, excluding commissions and reimbursements payable to FBR under the terms of the Sales Agreement, will be approximately \$10,000 (whereas the total expenses in connection with the initial at-the-market offering, including the preparation and review of the Prospectus Supplement dated August 15, 2016 and Sales Agreement was \$300,000 and the total expenses in connection with the filing of the February 2017 Prospectus Supplement was \$85,000).

Settlement for sales of common stock will generally occur on the third business day following the date on which any sales are made, or on some other date that is agreed upon by us and FBR in connection with a particular transaction, in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sale of the common stock on our behalf, FBR may, and will with respect to sales effected in an “at the market offering,” be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of FBR may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to FBR against certain civil liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the Sales Agreement will terminate upon the earlier of (i) the sale of all of our common stock subject to the Sales Agreement, or (ii) termination of the Sales Agreement as provided therein. We may terminate the Sales Agreement at any time upon five days’ prior notice and FBR may terminate the Sales Agreement at any time upon ten days’ prior notice.

FBR and its affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, FBR will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement.

This summary of the material provisions of the Sales Agreement does not purport to be a complete statement of its terms and conditions. A copy of the Sales Agreement has been filed with the SEC as an exhibit to a Current Report on Form 8-K dated August 15, 2016 and is incorporated by reference in this prospectus supplement.

This prospectus in electronic format may be made available on a website maintained by FBR and FBR may distribute this prospectus electronically.