

HEMISPHERX BIOPHARMA INC

Form S-1/A

July 20, 2018

As filed with the Securities and Exchange Commission on July 20 , 2018

Registration No. 333-226057

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1

TO

FORM S-1

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

Hemispherx Biopharma, Inc.

(Exact name of registrant as specified in its charter)

| | | |
|---|---|--|
| Delaware | 2836 | 52-0845822 |
| (State or other jurisdiction of incorporation or organization) | (Primary Standard Industry Classification Code Number) | (I.R.S. Employer Identification Number) |

860 N. Orange Avenue, Suite B

Orlando, FL 32801

(215) 988-0080

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

Thomas K. Equels, Chief Executive Officer

Hemispherx Biopharma, Inc.

860 N. Orange Avenue, Suite B

Orlando, FL 32801

(215) 988-0080

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

Copies to:

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Approximate date of commencement of proposed sale to the public: From time to time 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, please 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, 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, 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 or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act (check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
 Emerging growth company

If an emerging growth company, indicate by checkmark if the registrant has not elected 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.

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities To Be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price Per Unit (2) | Proposed Maximum Aggregate Offering Price(2) | Amount of Registration Fee |
|---|----------------------------|--|--|----------------------------|
| Common Stock, par value \$0.001 per share issuable upon exercise of warrants (including Series A Junior Participating Preferred Stock Purchase Rights)(3) | 6,600,000 | \$ 0.315 | \$2,079,000 | \$ 258.84 |

Pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares offered hereby also include an
 (1) indeterminate number of additional shares of common stock as may from time to time become issuable by reason of stock splits, stock dividends, recapitalizations or other similar transactions.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based upon the average of the high and low prices reported on the NYSE American on June 25, 2018.

(3) This Registration also relates to the rights to purchase shares of Series A Junior Participating Preferred Stock of the Registrant, which are attached to all shares of Common Stock pursuant to the terms of the Registrant's Amended and Restated Rights Agreement dated November 14, 2017 described herein under the section "Description of Common Stock." Until the occurrence of prescribed events, the preferred share purchase rights are not exercisable, are evidenced by the certificates for the Common Stock and will be transferred with and only with such Common Stock. The preferred share purchase rights are appurtenant to and trade with the Common Stock and no separate consideration will be received for the preferred share purchase rights. Therefore, the registration fee for the preferred shares purchase rights is included in the fee for the Common Stock.

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 that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this 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 it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated July 20 , 2018

PROSPECTUS

HEMISPHERX BIOPHARMA, INC.

6,600,000 Shares of Common Stock

Issuable Upon Exercise of Outstanding Warrants

This prospectus relates to the resale of an aggregate of 6,600,000 shares of our common stock, which may be offered for sale from time to time by the selling stockholders (the “Selling Stockholders”) named in this prospectus, that they may receive if they exercise their outstanding warrants (the “Warrants”).

We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale of common stock by the Selling Stockholders. To the extent the Warrants are exercised for cash, if at all, we will receive the exercise price of the Warrants. The Selling Stockholders or their pledgees, assignees or successors-in-interest may offer and sell or otherwise dispose of the shares of common stock described in this prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The shares of common stock may be sold in one or more transactions, at fixed prices, at prevailing market prices at the time of sale or at negotiated prices. The Selling Stockholders will be responsible for any underwriting fees, discounts and commissions due to underwriters, brokers-dealers or agents. We will bear all costs, expenses and fees in connection with the registration of the shares. Please see the section titled “Plan of Distribution” of this prospectus for a more complete description of how the offered common stock may be sold.

You should carefully read this prospectus and any prospectus supplement before you invest. You also should read the documents we have referred you to in the “Where You Can Find More Information” and the “Incorporation by Reference”

sections of this prospectus for information about us and our financial statements.

Our common stock is traded on the NYSE American under the symbol "HEB." On July 18, 2018, the last reported sale price for our common stock on the NYSE American was \$0.3052 per share.

Investing in our securities involves a high degree of risk. See "*Risk Factors*" on page 5 of this Prospectus.

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

The date of this prospectus is _____, 2018

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Neither we nor the Selling Stockholders have authorized any dealer, salesman or other person to provide you with information other than the information contained in or incorporated by reference into this prospectus. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, the common stock offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front cover of the prospectus, or that the information contained in any document incorporated by reference into this prospectus 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 or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains forward-looking statements that are subject to a number of risks and uncertainties, many of which are beyond our control. See “Risk Factors” and “Cautionary Statement Regarding Forward-Looking Statements”.

PROSPECTUS SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. It does not contain all the information you should consider before investing in our securities. Important information is incorporated by reference into this prospectus. To understand this offering fully, you should read carefully the entire prospectus, including “Risk Factors,” together with the additional information described under “Incorporation By Reference.”

Unless otherwise stated or the context otherwise requires, references in this prospectus to “Hemispherx”, “we”, “us”, “our” and “ours” refer to Hemispherx Biopharma, Inc.

Our Business

We are a specialty pharmaceutical company headquartered in Orlando, Florida, and engaged in the development of new drug therapies based on natural immune system enhancing technologies for the treatment of viral and immune based disorders. We have established a strong foundation of laboratory, pre-clinical and clinical data with respect to the development of natural interferon and nucleic acids to enhance the natural antiviral defense system of the human body and to aid the development of therapeutic products for the treatment of certain chronic diseases.

Our flagship products include Alferon N Injection and the experimental therapeutic Ampligen®. Alferon N Injection® is approved for a category of STD infection, and Ampligen represents an experimental RNA being developed for globally important viral diseases and disorders of the immune system. Hemispherx’ platform technology includes components for potential treatment of various severely debilitating and life-threatening diseases.

We operate a 30,000 sq. ft. facility in New Brunswick, NJ with the objective of producing Alferon and Ampligen upon FDA approval.

We are committed to a focused business plan oriented toward finding senior co-development partners with the capital and expertise needed to commercialize the many potential therapeutic aspects of our experimental drug, Ampligen, and our FDA approved drug, Alferon N Injection.

Recent Developments

We recently completed production of a commercial-size batch of more than 8,500 vials of Ampligen® and, following its “Fill & Finish” at the Contract Manufacturing Organization. This lot has passed all required testing for regulatory release for human use. Approximately 2,100 of these vials will be shipped to myTomorrows pursuant to a standing stock order for its Early Access Programs (EAPs). We will receive payment for these vials as it is dispensed in the EAP. We anticipate that the remaining vials, and additional planned batches, may be used for the commercial launch of Ampligen in Argentina and our projected initial needs for clinical trials of Ampligen in the United States, including the FDA-approved compassionate care program in Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS), and clinical trials involving various cancers with Ampligen as a stand-alone therapy as well as in combination with checkpoint blockade technology.

We and Roswell Park Comprehensive Cancer Center (Roswell Park) have recently expanded our existing scientific collaboration to advance the clinical development of Ampligen. In this regard, the parties executed a Memorandum of Understanding designed to further assess the clinical potential of Ampligen in treating certain cancers. This phase I/II study will evaluate the potential of Ampligen to enhance the immune mediated effects of checkpoint inhibitors in patients with advanced solid tumors and validate prior research that demonstrated synergy with this combination in preclinical models.

We recently filled and finished a second commercial-size batch production run of roughly 8,000 vials. This lot is currently undergoing regulatory testing for human use, a roughly two-month process.

Our Corporate Information

Our principal executive office is at 860 N. Orange Avenue, Suite B, Orlando, FL 32801 and our accounting and human resource office are at 600 Main Street, Suite 2, Riverton, NJ 08077. Our facility is located at 783 Jersey Ave., New Brunswick, New Jersey. Our principal telephone number is 215-988-0080. We maintain a website at “<http://www.hemispherx.net>”. Information contained on our website is not considered to be a part of, nor incorporated by reference in, this prospectus.

The Offering

| | |
|---|--|
| Common Stock offered by Selling Stockholders: | 6,600,000 Shares of common stock, \$0.001 par value per share, issuable upon exercise of Warrants. |
| Common Stock Outstanding: | 46,872,554, Shares of common stock outstanding as of July 18 , 2018. |
| Use of Proceeds: | We will not receive any of the proceeds from the sale of any shares of common stock by the Selling Stockholders. However, we will receive proceeds from the exercise of the Warrants if and when they are exercised in cash. See “Use of Proceeds”. |
| Risk Factors: | Investing in our common stock involves a high degree of risk. Please see “Risk Factors” and the risk factors set forth in the documents incorporated by reference herein for a discussion of risks to consider before deciding to purchase shares of our common stock. |
| NYSE American trading symbol: | HEB |

RISK FACTORS

Investment in our common stock involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus, you should carefully consider the risks described in the section entitled “Risk Factors” in our Annual Report on Form 10-K for our most recent fiscal year filed with the Securities and Exchange Commission (the “SEC”), subsequent Quarterly Reports on Form 10-Q, and in other reports we file with the SEC that are incorporated by reference herein, before making an investment decision. Such risks are presented as of the date of this prospectus and we expect that these will be updated from time to time in our periodic and current reports filed with the SEC, which will be incorporated herein by reference. Please refer to these subsequent reports for additional information relating to the risks associated with investing in our common stock. The risks and uncertainties described therein could materially adversely affect our business, operating results and financial condition, as well as cause the value of our common stock to decline. You may lose all or part of your investment as a result. You should also refer to the other information contained in this prospectus, or incorporated by reference, including our financial statements and the notes to those statements, and the information set forth under the caption “Cautionary Statement Note Regarding Forward-Looking Statements.” Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks incorporated by reference herein. Forward-looking statements included in this prospectus are based on information available to us on the date hereof, and all forward-looking statements in documents incorporated by reference are based on information available to us as of the date of such documents. We disclaim any intent to update any forward-looking statements. The risks contained in our Annual Report on Form 10-K, Form 10-Q and in our other periodic reports are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business operations.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this prospectus and in the other filings incorporated by reference herein, constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended which we refer to as the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements reflect our current views with respect to future events and are based on assumptions and are subject to risks, uncertainties and other important factors. We discuss many of these risks, uncertainties and other important factors in greater detail under the “Risk Factor” sections in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and in subsequent Quarterly Reports on Form 10-Q, as well as other filings we make with the SEC (collectively, our “SEC Filings”), all of which are incorporated by reference herein. As the foregoing risks could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, you should not place undue reliance on any such forward-looking statements.

Further, these forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should carefully read the risks, uncertainties and other important factors in our SEC Filings completely and with the understanding that our actual future results may be materially different from what we expect. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our business, results of operations and financial condition. Any forward-looking statement speaks only as of the date on which it is made and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which will arise. We cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Any statements in this prospectus, and in the other filings incorporated by reference herein about our expectations, beliefs, plans, objectives, assumptions or future events or performance that are not historical facts are forward-looking statements. You can identify these forward-looking statements by the use of words or phrases such as “believe”, “may”, “could”, “will”, “estimate”, “continue”, “anticipate”, “intend”, “seek”, “plan”, “expect”, “would,” and similar expressions intended to identify forward-looking statements.

Among the factors that could cause actual results to differ materially from those indicated in the forward-looking statements are risks and uncertainties inherent in our business including, without limitation: our ability to adequately fund our projects as we will need additional funding to proceed with our objectives, the potential therapeutic effect of our products, the possibility of obtaining regulatory approval, our ability to find senior co-development partners with the capital and expertise needed to commercialize our products and to enter into arrangements with them on commercially reasonable terms, our ability to manufacture and sell any products, our ability to enter into arrangements with third party vendors, market acceptance of our products, our ability to earn a profit from sales or licenses of any drugs, our ability to discover new drugs in the future, changing market conditions, changes in laws and regulations affecting our industry, and issues related to our New Brunswick, New Jersey facility. We have disclosed that in February 2013, we received a Complete Response from the U.S. Food and Drug Administration (the “FDA”) declining to approve our Ampligen® New Drug Application (“NDA”) for Chronic Fatigue Syndrome Treatment, sometimes referred to as myalgic encephalomyelitis/chronic fatigue syndrome (“ME/CFS”), stating that we should conduct at least one additional clinical trial, complete various nonclinical studies and perform a number of data analyses. Accordingly, the remaining steps to potentially gain FDA approval of the Ampligen® NDA, the final results of these and other ongoing activities could vary materially from our expectations and could adversely affect the chances for approval of the Ampligen® NDA. These activities and the ultimate outcomes are subject to a variety of risks and uncertainties, including but not limited to risks that (i) the FDA may ask for additional data, information or studies to be completed or provided; and (ii) the FDA may require additional work related to the commercial manufacturing process to be completed or may, in the course of the inspection of manufacturing facilities, identify issues to be resolved. With regard to our NDA for Ampligen® to treat ME/CFS, as noted above, there are additional steps which the FDA has advised Hemispherx to take in our seeking approval. The final results of these and other ongoing activities, and of the FDA review, could vary materially from Hemispherx’ expectations and could adversely affect the chances for approval of the Ampligen® NDA. Any failure to satisfy the FDA’s requirements could significantly delay, or preclude outright, approval of our drugs for commercial sale in the United States.

We also have disclosed that, in August 2016, we received approval of our NDA from Administracion Nacional de Medicamentos, Alimentos y Tecnologia Medica (“ANMAT”) for commercial sale of rintatolimod (U.S. tradename: Ampligen®) in the Argentine Republic for the treatment of severe ME/CFS. The product will be marketed by GP Pharm, our commercial partner in Latin America. We believe, but cannot assure, that this approval provides a platform for potential sales in certain countries within the European Union under regulations that support cross-border pharmaceutical sales of licensed drugs. In Europe, approval in a country with a stringent regulatory process in place, such as Argentina, should add further validation for the product as the Early Access Program (“EAP”) as discussed below and underway in Europe. ANMAT approval is only an initial, but important, step in the overall successful commercialization of our product. There are a number of actions that must occur before we could be able to commence commercial sales in Argentina. Commercialization in Argentina will require, among other things, an appropriate reimbursement level, appropriate marketing strategies, completion of manufacturing preparations for launch (including possible requirements for approval of final manufacturing) and we may need additional funds to manufacture product at a sufficient level for a commercial launch. There are no assurances as to whether or when such multiple subsequent steps will be successfully performed to result in an overall successful commercialization and product launch. Approval of rintatolimod for ME/CFS in the Argentine Republic does not in any way suggest that the Ampligen® NDA in the United States or any comparable application filed in the European Union or elsewhere will obtain commercial approval.

We also have disclosed that, in May 2016, we entered into a five year agreement with myTomorrows, a Netherlands based company, for the commencement and management of an EAP in Europe and Turkey (the “Territory”) related to CFS. Pursuant to the agreement, myTomorrows, as our exclusive service provider and distributor in the Territory, is performing EAP activities. In January 2017, we announced that the EAP has been extended to pancreatic cancer patients beginning in the Netherlands. In June 2017, we signed an amendment to provide support services to Hemispherx with respect to the execution of the 511-Program (“511-Services”) and that the 511-Services shall be rendered free of charge. In February 2018, we signed an amendment to extend the territory to cover Canada to treat pancreatic cancer patients, pending government approval. In March 2018, we signed an amendment to which myTomorrows will be our exclusive service provider for special access activities in Canada for the supply of Ampligen for the treatment of ME/CFS. No assurance can be given that we can sufficiently supply product should we experience an unexpected demand for Ampligen in our clinical studies, the commercial launch in Argentina or pursuant to the EAPs. No assurance can be given that Ampligen® will prove effective in the treatment of pancreatic cancer.

Our overall objectives include plans to continue seeking approval for commercialization of Ampligen® in the United States and abroad as well as seeking to broaden commercial therapeutic indications for Alferon N Injection® presently approved in the United States and Argentina. We continue to pursue senior co-development partners with the capital and expertise needed to commercialize our products and to enter into arrangements with them on commercially reasonable terms. Our ability to commercialize our products, widen commercial therapeutic indications of Alferon N Injection® and/or capitalize on our collaborations with research laboratories to examine our products are subject to a number of significant risks and uncertainties including, but not limited to our ability to enter into more definitive agreements with some of the research laboratories and others that we are collaborating with, to fund and conduct additional testing and studies, whether or not such testing is successful or requires additional testing and meets the requirements of the FDA and comparable foreign regulatory agencies. We do not know when, if ever, our products will be generally available for commercial sale for any indication.

We outsource certain components of our manufacturing, quality control, marketing and distribution while maintaining control over the entire process through our quality assurance and regulatory groups. We cannot provide any guarantee that the facility or our contract manufacturer will necessarily pass an FDA pre-approval inspection for Alferon® manufacture.

The production of new Alferon® API inventory will not commence until the validation phase is complete. While the facility is approved by FDA under the Biological License Application (“BLA”) for Alferon®, this status will need to be reaffirmed by a successful Pre-Approval Inspection by the FDA prior to commercial sale of newly produced inventory product. If and when the Company obtains a reaffirmation of FDA BLA status and has begun production of new Alferon® API, it will need FDA approval as to the quality and stability of the final product to allow commercial sales to resume. We will need additional funds to finance the revalidation process in our facility to initiate commercial manufacturing, thereby readying ourselves for an FDA Pre-Approval Inspection. If we are unable to gain the necessary FDA approvals related to the manufacturing process and/or final product of new Alferon® inventory, our operations most likely will be materially and/or adversely affected. In light of these contingencies, there can be no assurances that the approved Alferon N Injection® product will be returned to production on a timely basis, if at all, or

that if and when it is again made commercially available, it will return to prior sales levels. In addition, we are currently readying the New Brunswick facility to start manufacturing polymers used for the production of Ampligen to satisfy our future needs, supplementing the polymers we have on hand. While we anticipate that we will be able to commence manufacturing polymers at the New Brunswick facility, we may need additional funding to continue manufacturing. There cannot be any guarantee that we will obtain adequate funds to sustain manufacturing at the New Brunswick facility or that the facility will be able to manufacture sufficient lots for the commercial launch of Ampligen.

We believe, and are investigating, Ampligen's potential role in enhancing the activity of influenza vaccines. While certain studies involving rodents, non-human primates (monkeys) and healthy human subjects indicate that Ampligen may enhance the activity of influenza vaccines by conferring increased cross-reactivity or cross-protection, further studies will be required and no assurance can be given that Ampligen will assist in the development of a universal vaccine for influenza or other viruses.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of any shares of common stock by the Selling Stockholders. However, we will receive proceeds from the exercise of the Warrants if and when they are exercised in cash. As of the date of this prospectus, the exercise prices of the Warrants are above the current trading price of our common stock.

MARKET PRICE OF OUR COMMON STOCK

The following table sets forth the high and low prices for our common stock for the last two fiscal years and the first quarter of 2018 as reported by the NYSE American. The following prices give retroactive effect to the 12-to-1 reverse stock split effected on August 26, 2016.

| | High | Low |
|---|---------|---------|
| COMMON STOCK | | |
| Time Period: | | |
| January 1, 2018 through March 31, 2018 | \$ 0.65 | \$ 0.34 |
| April 1, 2018 through June 30, 2018 | \$ 0.50 | \$ 0.28 |
| January 1, 2017 through March 31, 2017 | \$ 0.93 | \$ 0.39 |
| April 1, 2017 through June 30, 2017 | \$ 0.84 | \$ 0.45 |
| July 1, 2017 through September 30, 2017 | \$ 0.74 | \$ 0.30 |
| October 1, 2017 through December 31, 2017 | \$ 0.39 | \$ 0.30 |
| January 1, 2016 through March 31, 2016 | \$ 2.40 | \$ 0.78 |
| April 1, 2016 through June 30, 2016 | \$ 1.92 | \$ 1.24 |
| July 1, 2016 through September 30, 2016 | \$ 2.64 | \$ 1.24 |
| October 1, 2016 through December 31, 2016 | \$ 1.26 | \$ 0.65 |

On July 18, 2018, the last sale price for our common stock on the NYSE American was \$0.3052 per share.

SELLING STOCKHOLDERS

The shares of common stock being offered by the Selling Stockholders pursuant to this prospectus are those issuable upon exercise of Warrants previously issued to the Selling Stockholders and identified below (the “Warrant Shares”). We are registering the Warrant Shares in order to permit the Selling Stockholders to offer the shares for resale from time to time. Except for the ownership of shares acquired in registered direct offerings and unregistered common stock purchase warrants issued in conjunction therewith, the Selling Stockholders have not had any material relationship with us within the past three years.

The table below lists the Selling Stockholders and other information regarding the beneficial ownership of our common stock by each of the Selling Stockholders, and is based on 46,872,554 shares of our common stock outstanding on July 18, 2018. The number of shares listed as beneficially owned by each Selling Stockholder is based on its ownership of shares and Warrants as of June 20, 2018 and assumes exercise of the Warrants held by the Selling Stockholders on that date, without regard to any limitations on exercises.

The Warrants held by the Selling Stockholders consist of:

- Series A Warrants dated April 24, 2018 exercisable for an aggregate of 3,300,000 shares of common stock at an (i) exercise price of \$0.39 per share, initially exercisable on October 24, 2018 and expiring on October 24, 2020 (“Series A Warrants”); and
- Series B Warrants dated April 24, 2018 exercisable for an aggregate of 3,300,000 shares of common stock at an (ii) exercise price of \$0.39 per share, initially exercisable on October 24, 2018 and expiring on October 24, 2023 (“Series B Warrants”).

Although the Warrants held by the Selling Stockholders are not exercisable until at least October 24, 2018, for purposes of the table below, the Shares of common stock and percentage ownership identified below assume that the Warrants are currently exercisable and thus the shares of common stock underlying the Warrants are deemed to be outstanding and to be beneficially owned by the Selling Stockholders holding the Warrants, but are not treated as outstanding for the purpose of computing the percentage ownership of any other Selling Stockholders.

Under the terms of the Warrants, a Selling Stockholder may not exercise Warrants to the extent that such Selling Stockholder, together with its affiliates, would beneficially own, after such exercise more than 4.99% of the shares of common stock then outstanding (subject to the right of the Selling Stockholder to increase or decrease such beneficial ownership limitation upon notice to us, provided that such limitation cannot exceed 9.99%) and provided that any increase in the beneficial ownership limitation shall not be effective until 61 days after such notice is delivered. The number of shares does not reflect this limitation. The Selling Stockholders may sell all, some or none of their shares in

this offering. See “Plan of Distribution.”

| Name of Selling Stockholder | Shares Beneficially Owned Prior to the Offering | | Maximum Number of | Shares Beneficially Owned After Giving Effect to the Offering | | | |
|---|--|---|--------------------------|---|---|---|--|
| | Number of Shares of Common Stock Owned Prior to the Offering | Percentage of Shares Beneficially Owned Prior to the Offering | | Shares of Common Stock to be Sold Pursuant to this Prospectus (1) | Number of Shares of Common Stock Owned After the Offering | Percentage of Shares Beneficially Owned After Giving Effect to the Offering | |
| Sabby Healthcare Master Fund, Ltd. (2)(4) | 1,266,465 | 2.64 | % 500,000 | 766,465 | 1.60 | % | |
| Sabby Volatility Warrant Master Fund, Ltd. (3)(4) | 2,497,892 | 4.99 | % 2,800,000 | 2,497,892 | 4.99 | % | |
| Anson Investments Master Fund LP. (5) | 2,577,279 | 4.99 | % 3,300,000 | 2,577,279 | 4.99 | % | |

We do not know when or in what amounts a Selling Stockholder may offer shares for sale. The Selling Stockholders may choose not to sell any or all of the shares offered by this prospectus. Because the Selling Stockholders may offer all or some of the shares pursuant to this offering, we cannot estimate the number of the

(1) shares that will be held by the Selling Stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, all of the shares covered by this prospectus will be sold by the Selling Stockholders.

(2) 250,000 shares of common stock issuable upon exercise of Series A Warrants, 250,000 shares of common stock issuable upon exercise of Series B Warrants are registered for sale under this prospectus.

(3) 1,400,000 shares of common stock issuable upon exercise of Series A Warrants and 1,400,000 shares of common stock issuable upon exercise of Series B Warrants are registered for sale under this prospectus.

Sabby Management, LLC is the investment manager of Sabby Healthcare Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. and shares voting and investment power with respect to these shares in this capacity. As

(4) manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of each of the foregoing Selling Stockholder. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein.

1,650,000 shares of common stock issuable upon exercise of Series A Warrants and 1,650,000 shares of common stock issuable upon exercise of Series B Warrants are registered for sale under this prospectus. Anson Advisors Inc. and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP

(5) (“Anson”), hold voting and dispositive power over the Common Shares held by Anson. Bruce Winson is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Winson, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein.

DESCRIPTION OF COMMON STOCK

As of July 18, 2018, there were 46,872,554 shares of our common stock outstanding. Holders of our common stock are entitled to one vote per share for the election of directors and on all other matters that require stockholder approval. Holders of shares of common stock do not have any cumulative voting rights. Subject to any preferential rights of any outstanding preferred stock, in the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets remaining after payment of liabilities and the liquidation preferences of any outstanding preferred stock. Our common stock does not carry any redemption rights or any preemptive or preferential rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock.

On November 19, 2002, our Board of Directors declared a dividend distribution of one Right (a “Right”) for each outstanding share of Common Stock to stockholders of record at the close of business on November 29, 2002. On November 14, 2017, at the direction of the Board, we amended and restated our Rights Agreement with American Stock Transfer & Trust Company, LLC (as amended and restated, the “Rights Agreement”). Each Right entitles the

registered holder to purchase from us a unit consisting of one one-hundredth of a share (a “Unit”) of Series A Junior Participating Preferred Stock, par value \$0.01 per share (the “Series A Preferred Stock”) at a Purchase Price of \$21.00 per Unit, subject to adjustment. The description and terms of the Rights are set forth in the Rights Agreement. The foregoing description of the Rights and the Rights Agreement are qualified in their entire by reference to the disclosure in our Registration Statement on Form 8-A12B (No. 0-27072) and the Rights Agreement filed therewith, filed with the SEC on November 14, 2017, with such filing and exhibit being herein incorporated by reference.

PLAN OF DISTRIBUTION

Each Selling Stockholder and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their common stock covered hereby on the principal trading market or any other stock exchange, market or trading facility on which our common stock is traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling securities:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell common stock as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

settlement of short sales;

in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such common stock at a stipulated price per share;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

a combination of any such methods of sale; or

any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell common stock under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of common stock, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of common stock therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of common stock in the course of hedging the positions they assume. The Selling Stockholders may also sell common stock short and deliver these shares to close out their short positions, or loan or pledge common stock to broker-dealers that in turn may sell these shares. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of common stock offered by this prospectus, which common stock such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the common stock may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the common stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock.

We are required to pay certain fees and expenses incurred by us incident to the registration of the common stock. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because Selling Stockholders may be deemed to be “underwriters” within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any common stock covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

Certain legal matters in connection with our common stock offered hereby will be passed upon for us by Silverman Shin & Byrne PLLC.

EXPERTS

The consolidated financial statements incorporated in this Prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2017, have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report incorporated herein by reference. Such consolidated financial statements have been incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are required to file annual and quarterly reports and other information with the SEC. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C., 20549. Please call 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our filings will also be available to the public from commercial document retrieval services and at the web site maintained by the SEC at <http://www.sec.gov>. Except as described below, our reports and other information that we have filed, or may in the future file, with the SEC are not incorporated by reference into and do not constitute part of this prospectus.

We have filed with the SEC a registration statement on Form S-1 (including the exhibits, schedules and amendments thereto) under the Securities Act, with respect to the shares of our common stock that may be issued upon exercise of Warrants. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus as to the contents of any contract, agreement or any other document are summaries of the material terms of such contract, agreement or other document and are not necessarily complete. With respect to each of these contracts, agreements or other documents filed as an exhibit to the registration statement, reference is made to the exhibits for a more complete description of the matter involved.

We also maintain a website at www.hemispherx.net through which you can access our filings with the Commission. The information contained in, or accessible through, our website is not a part of this prospectus.

INCORPORATION BY REFERENCE

We “incorporate by reference” information from other documents that we file with the SEC into this prospectus, which means that we disclose important information to you by referring you to those documents. The information incorporated by reference is deemed to be part of this prospectus except for any information that is superseded by information included directly in this prospectus, and the information that we file later with the SEC will automatically supersede this information. Any statement contained in this prospectus or any prospectus supplement or a document incorporated by reference in this prospectus or in any prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document that is incorporated by reference in this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You should not assume that the information in this prospectus is current as of the date other than the date on the cover page of this prospectus.

The following documents previously filed by us with the SEC are incorporated by reference in this prospectus:

Our Annual Report on Form 10-K for the year ended December 31, 2017;
Our quarterly report on Form 10-Q for the quarter ended March 31, 2018;
Our Current Reports on Form 8-K filed with the SEC on January 12, 2018, January 22, 2018, March 2, 2018, March 22, 2018, April 6, 2018, April 17, 2018, April 20, 2018 and May 2, 2018; and the amended Current Report on Form 8-K/A filed with the Commission on March 19, 2018;
Our definitive proxy statement on Schedule 14A filed on July 18, 2017;
A description of the Rights to purchase shares of our Series A Junior Participating Preferred Stock, which are attached to all shares of Common Stock, is contained in our registration statement on Form 8-A12B, SEC File No. 0-27072, filed on November 14, 2017; and
A description of our common stock contained in our registration statement on Form S-1, SEC File No. 333-117178, and any amendment or report filed for the purpose of updating this description.

All filings made by us with the Commission that we file pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into the prospectus.

We are also incorporating by reference into this prospectus any additional documents that we may file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the effective date of the registration statement and prior to the termination of the offering.

You may request a copy of any document incorporated by reference in this prospectus and any exhibit specifically incorporated by reference in those documents, at no cost, by writing or telephoning us at the following address or phone number:

Hemispherx Biopharma, Inc.

860 N. Orange Avenue, Suite B

Orlando, FL 32801

Attention: Corporate Secretary

(215) 988-0800

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses payable by Hemispherx Biopharma, Inc. in connection with the sale of the securities being registered hereby. All amounts are estimates except the Securities and Exchange Commission registration fee.

| | |
|-----------------------------------|----------|
| SEC Filing Fees | \$259 |
| Printing and Engraving Expenses | \$1,000 |
| Accounting Fees and Expenses | \$5,000 |
| Legal Fees and Expenses | \$10,000 |
| Transfer Agent and Registrar Fees | \$5,000 |
| Miscellaneous | \$1,000 |
| Total Expenses | \$22,259 |

ITEM 14. Indemnification of Directors and Officers.

Article Eighth of our Amended and Restated Certificate of Incorporation provides that we shall indemnify to the extent permitted by Delaware law any person whom it may indemnify thereunder, including directors, officers, employees and agents. Such indemnification (other than an order by a court) shall be made by us only upon a determination that indemnification is proper in the circumstances because the individual met the applicable standard of conduct. Advances for such indemnification may be made pending such determination. In addition, the Registrant’s Amended and Restated Certificate of Incorporation eliminates, to the extent permitted by Delaware law, personal liability of directors to the Registrant and its stockholders for monetary damages for breach of fiduciary duty as directors.

The Registrant’s authority to indemnify its directors and officers is governed by the provisions of Section 145 of the Delaware General Corporation Law (the “DGCL”), as follows:

- (a) A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise,

against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

II-1

A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

To the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of this section, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

Any indemnification under subsections (a) and (b) of this section (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in subsections (a) and (b) of this section. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.

Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative or investigative action, suit or proceeding may be paid by the corporation in advance of the final disposition or such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the corporation as authorized in this section. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents or by persons serving at the request of the corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as the corporation deems appropriate.

The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this section shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to the certificate of incorporation or the bylaws after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, suit or proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.

II-2

(g) A corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify such person against such liability under this section.

(h) For purposes of this section, references to the “corporation” shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had the power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this section with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued.

(i) For purposes of this section, references to “other enterprises” shall include employee benefit plans, references to “fines” shall include any excise taxes assessed on a person with respect to any employee benefit plan, and references to “serving at the request of the corporation” shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to any employee benefit plan, its participants or beneficiaries, and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of any employee benefit plan shall be deemed to have acted in a manner “not opposed to the best interests of the corporation” as referred to in this section.

(j) The indemnification and advancement of expenses provided by, or granted pursuant to, this section shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(k) The Court of Chancery is hereby vested with exclusive jurisdiction to hear and determine all actions for advancement of expenses or indemnification brought under this section, or under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. The Court of Chancery may summarily determine a corporation’s obligation to advance expenses (including attorneys’ fees).

Pursuant to Section 102(b)(7) of the DGCL, Article Ninth of our amended and restated certificate of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

from any breach of the director’s duty of loyalty to us or our stockholders;

from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;

under Section 174 of the DGCL; and

from any transaction from which the director derived an improper personal benefit. If the DGCL is amended to authorize corporate action further limiting or eliminating the personal liability of directors, then the liability of a director shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended. No amendment to, repeal or adoption of any provision of the certificate of incorporation inconsistent with article Ninth shall apply to or have any effect on the liability of any director for or with respect to any act or omission of such director occurring prior to such amendment, repeal, or adoption of an inconsistent provision.

II-3

The foregoing discussion of our amended and restated certificate of incorporation and Delaware law is not intended to be exhaustive and is qualified in its entirety by such certificate of incorporation or law. Insofar as the foregoing provisions permit indemnification of directors, executive officers, or persons controlling us for liability arising under the Securities Act of 1933, as amended, or the Securities Act, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 15. Recent Sales of Unregistered Securities

The following sets forth information regarding all unregistered securities sold by us in the three years preceding the date of this registration statement. This information has been retroactively adjusted to reflect the reverse stock split for all periods presented:

On September 6, 2016, we entered into Securities Purchase Agreements (the “9-16 Purchase Agreement”) with certain investors for the sale by us of 3,333,334 shares of our Common Stock registered under our S-3 shelf registration statement on at a purchase price of \$1.50 per share. Concurrently with the sale of the common stock, pursuant to the 9-16 Purchase Agreement, we also sold unregistered warrants to purchase 2,500,000 shares of common stock for aggregate gross proceeds of \$5,000,000. Subject to certain ownership limitations, the warrants are initially exercisable six-month after issuance at an exercise price equal to \$2.00 per share of common stock, subject to adjustments as provided under the terms of the warrants. The warrants are exercisable for five years from the initial exercise date. Pursuant to an engagement agreement, we paid our placement agent an aggregate fee equal to 7% of the gross proceeds received by us from the sale of the securities in the offering and granted to our placement agent or its designees warrants to purchase up to 5% of the aggregate number of shares sold in the transactions amounting to 166,667 unregistered warrants. The placement agent warrants have substantially the same terms as the investor warrants, except that the placement agent warrants will expire on September 1, 2021 and have an exercise price equal to \$1.875 per share of common stock. The Company subsequently registered the shares issuable upon exercise of the warrants on Form S-1.

On December 22, 2016, we issued 68,493 shares of our common stock at \$0.73 per share directly to Thomas Equels, our CEO, for \$50,000 in a private transaction pursuant a stock purchase agreement.

On February 1, 2017, we entered into Securities Purchase Agreements (the “2-17 Purchase Agreements”) with certain investors for the sale by us of 1,818,185 shares of our common stock at a purchase price of \$0.55 per share. Concurrently with the sale of the common stock, pursuant to the 2-17 Purchase Agreements, we also sold unregistered warrants to purchase 1,363,639 shares of common stock for aggregate gross proceeds of approximately \$1,000,000. The warrants have an exercise price of \$0.75 per share, are exercisable six months after issuance, and will expire five years from the initial exercise date. Pursuant to an engagement agreement, we paid our placement agent an aggregate fee equal to 7% of the gross proceeds received by us from the sale of the securities in the offering and granted to our

placement agent or its designees warrants to purchase up to 5% of the aggregate number of shares sold in the transactions amounting to 90,910 unregistered warrants. The placement agent warrants have substantially the same terms as the investor warrants, except that the placement agent warrants will expire on February 1, 2022 and have an exercise price equal to \$0.6875 per share of common stock. The Company subsequently registered the shares issuable upon exercise of the warrants on Form S-1.

The Board of Directors approved up to \$500,000 for all directors, officers and employees to buy Company shares from the Company at the market price. During April and May 2017, the Company issued 328,020 shares of its common stock at prices between \$0.50 and \$0.69 per share directly to executives and employees, for \$185,000 in a series of private transactions pursuant to stock purchase agreements. On April 27, 2018, the Company issued 132,000 shares of its common stock at \$0.32 per share directly to an executive and a director for \$42,240.

On June 1, 2017, the exercise price of Warrants issued in September 2016 was changed to \$0.50. As a result, the warrant holders exercised these Warrants and purchased 2,370,000 shares of Company common stock. The Company realized net proceeds of \$1,055,000 from this exercise. In conjunction with the foregoing, the Company also issued 2,370,000 series A warrants with an exercise price of \$0.60 per share, an initial exercise date of December 1, 2017 and expiring March 6, 2022 (the “Series A Warrants”) and 7,584,000 series B warrants with exercise price of \$0.60, an initial exercise date December 1, 2017 per share and expiring March 1, 2018. The foregoing transactions are hereinafter referred to as the “Exchange Transaction”.

In addition, on July 10, 2017, the warrant holders exercised the remaining 130,000 warrants issued in September 2016 and purchased 130,000 shares of common stock. The Company realized net proceeds of \$65,000 from this exercise. In conjunction with the foregoing the Company issued 130,000 Series A Warrants and 416,000 Series B Warrants (with an exercise price of \$0.60 and an initial exercise date January 10, 2018 on the three month anniversary of the of the initial exercise date).

On August 23, 2017, the Holders of the Series A Warrants and Series B Warrants exchanged all of their Warrants for new warrants (respectively, the “Series A Exchange Warrants” and the “Series B Exchange Warrants” and, collectively, the “Exchange Warrants”) identical to the Warrants except as follows: The exercise price of both Exchange Warrants is \$0.45 per share, subject to adjustment therein, and the number of Series B Exchange Warrants issued was proportionately reduced to an aggregate of 2,800,000 warrants so that all Exchange Warrants in the Exchange Transaction do not exceed 19.9% of the number of the Company’s issued and outstanding shares of Common Stock as of May 31, 2017, the date of the Exchange Transaction offer letters. The issuance of the Exchange Warrants by the Company and the shares of Common Stock issuable upon exercise of the Exchange Warrants is exempt from registration pursuant to Sections 3(a)(9) and 4(a)(2) of the Securities Act.

The foregoing 2,800,000 Series B Exchange Warrants were exercised in January and February 2018. The Company realized proceeds of \$1,260,000 from these exercises.

Effective with the semi-monthly period ended April 30, 2017, all of the members of the Company’s Board of Directors agreed to accept 100% of their directors’ fees in the form of options to purchase Company Common Stock. This program was terminated as of August 31, 2017. In this regard, options to purchase 206,082 shares of Company common stock were issued with exercise prices ranging from \$0.36 to \$0.67, a holding period of 10 years and vesting over three years. In addition, commencing with the semi-monthly period ended June 15, 2017, certain officers of the Company and certain other employees of the Company, agreed to accept 20% of their salary in options to purchase Company Common Stock. This program was also terminated as of August 31, 2017. In this regard, options to purchase 214,866 shares of Company common stock were issued with exercise prices ranging from \$0.36 to \$0.67, a holding period of 10 years and vesting over three years.

As part of the cash conservation program adopted on August 28, 2017, starting with the month of September 2017, the directors agreed to defer 100% of their fees until cash is available. In consideration of this deferral, 226,023 options were issued to each of the two independent directors in February 2018 with an exercise price of \$0.37 for a period of 10 years with a vesting period of 3 years, and 152,053 options were issued to each of the two independent directors in May 2018 with an exercise price of \$0.30 for a period of 10 years with a vesting period of 3 years.

Also as part of the cash conservation program adopted on August 28, 2017, starting with the month of September 2017, certain officers agreed to defer 40% of their salaries until cash is available. In consideration of this deferral, 884,459 options were issued to these officers in February 2018 with an exercise price of \$0.37 for a period of 10 years with a vesting period of 3 years, and 599,168 options were issued to these officers in May 2018 with an exercise price of \$0.30 for a period of 10 years with a vesting period of 3 years.

In April 2018, the Board of Directors approved a payment of 50% of the then deferred Board fees and deferred officer salaries. In May 2018, the Board of Directors approved a payment of 33% of the then deferred Board fees and deferred officer salaries. However, 100% of the current Board fees and 40% of the current officer salaries continue to be deferred.

Also as part of the cash conservation program adopted on August 28, 2017, all employees agreed to be paid 50% of their salaries in the form of unrestricted common stock of the Company. Starting with the month of September 2017, the salaries of all the employees of the Company were paid 50% in the form of unrestricted common stock of the Company. The total number of shares issued as of July 18, 2018 to the employees under this program were 2,010,534 shares at stock prices ranging from \$0.31 to \$0.55 per share. This program will continue until discontinued by the Board of Directors.

On April 20, 2018, the Company entered into Securities Purchase Agreements (the “4-18 Purchase Agreements”) with certain investors for the sale by the Company of an aggregate of 6,600,000 shares of the Company’s Common Stock, at a purchase price of \$0.39 per share. Concurrently with the sale of the Common Shares, pursuant to the 4-18 Purchase Agreements the Company also sold 6,600,000 warrants, 50% of which are Class A Warrants and 50% of which are Class B Warrants. The Company will receive gross proceeds from the sale of these Warrants solely to the extent such Warrants are exercised for cash. Both classes of these Warrants will not be exercisable until six months after issuance and will have an exercise price of \$0.39 per share, subject to adjustments as provided under the terms of these Warrants. The Class A Warrants and Class B Warrants will expire, respectively, two and five years after the date on which they are first exercisable. The closing of the sales of these securities under the Purchase Agreements took place on April 24, 2018. The Company is registering the shares issuable upon exercise of the warrants in this registration statement.

In connection with the foregoing unregistered issuance of securities, except as noted above, we relied upon the exemption from securities registration afforded by Rule 506 of Regulation D as promulgated by the United States Securities and Exchange Commission under the Securities Act and/or Section 4(a)(2) of the Securities Act.

ITEM 16. Exhibits.

(a) *Exhibits.*

See the Exhibit Index immediately preceding the signature page hereto, which is incorporated into this Item 16(a) by reference.

ITEM 17. Undertakings.

The undersigned registrant hereby undertakes:

(a) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

(b) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(c) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(d) that, for purposes of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of this registration statement as of the date the filed prospectus was deemed part of and included in this registration statement; and

(B) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(ii) if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

| Exhibit | Description |
|---------|---|
| No. | |
| 1.1 | <u>July 23, 2012 Equity Distribution Agreement with Maxim Group LLC (1)</u> |
| 1.2 | <u>March 21, 2018 Engagement Agreement with Ascendant Capital Markets, LLC (45)</u> |
| 3.1 | Amended and Restated Certificate of Incorporation of the Company, as amended, along with Certificates of Designations. (2) |
| 3.2 | <u>Amendment to Certificate of Incorporation. (3)</u> |
| 3.3 | <u>Amendment to Certificate of Incorporation. (4)</u> |
| 3.4 | <u>Amended and Restated By-Laws of Registrant. (35)</u> |
| 4.1 | Specimen certificate representing our Common Stock. (2) |
| 4.2 | <u>Amended and Restated Rights Agreement, dated as of November 14, 2017, between the Company and American Stock Transfer & Trust Company LLC. The Amended and Restated Right Agreement includes the Form of Certificate of Designation, Preferences and Rights of the Series A Junior Participating Preferred Stock, the Form of Rights Certificate and the Summary of the Right to Purchase Preferred Stock. (5)</u> |
| 4.3 | <u>Form of Indenture filed with Form S-3 Universal Shelf Registration Statement. (6)</u> |
| 4.4 | <u>Form of Warrant pursuant to August 30, 2016 Securities Purchase Agreement. (38)</u> |
| 4.5 | <u>Form of Warrant pursuant to February 1, 2017 Securities Purchase Agreement. (40)</u> |
| 4.6 | <u>Form of Series A Warrant-June 2017. (43)</u> |
| 4.7 | <u>Form of Series B Warrant-June 2017. (43)</u> |
| 4.8 | <u>Form of New Series A Warrant-August 2017. (42)</u> |
| 4.9 | <u>Form of New Series B Warrant-August 2017. (42)</u> |
| 4.10 | <u>Form of Warrant issued to Purchaser of facility. (23)</u> |
| 4.11 | <u>Form of Series A Warrant- April 2018. (46)</u> |
| 4.12 | <u>Form of Series B Warrant- April 2018. (46)</u> |
| 5.1 | <u>Opinion of Silverman Shin & Byrne PLLC, legal counsel.*</u> |
| 10.1 | Form of Confidentiality, Invention and Non-Compete Agreement. (2) |
| 10.2 | Form of Clinical Research Agreement. (2) |
| 10.3 | <u>Employee Wage or Hours Reduction Program. (7)</u> |
| 10.4 | <u>Supply Agreement with Hollister-Stier Laboratories LLC dated December 5, 2005. (9)</u> |
| 10.5 | <u>Amendment to Supply Agreement with Hollister-Stier Laboratories LLC dated February 25, 2010. (10)</u> |
| 10.6 | <u>Amended and Restated Employment Agreement of Dr. William A. Carter dated June 11, 2010 (11)</u> |
| 10.7 | <u>Vendor Agreement with Bio Ridge Pharma, LLC dated August 11, 2011. (33).</u> |
| 10.8 | <u>Vendor Agreement with Armada Healthcare, LLC dated August 11, 2011. (33).</u> |
| 10.9 | <u>Amended and restated employment agreement with Wayne Springate dated May 1, 2011. (13)</u> |
| 10.10 | <u>Amended and restated employment agreement with William A. Carter dated December 6, 2011. (16)</u> |
| 10.11 | <u>Amended and restated employment agreement with Thomas K. Equels dated December 6, 2011. (16)</u> |
| 10.12 | <u>Amendment to Supply Agreement with Hollister-Stier Laboratories LLC executed September 9, 2011. (17)</u> |
| 10.13 | <u>Vendor Agreement extension with Bio Ridge Pharma, LLC dated August 14, 2012. (18)</u> |
| 10.14 | <u>Vendor Agreement extension with Armada Healthcare, LLC dated August 14, 2012. (18)</u> |
| 10.15 | <u>Advisor’s Agreement with The Sage Group dated June 15, 2013. (20)</u> |

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- 10.16 Vendor Agreement extension with Armada Healthcare, LLC dated July 19, 2013. (21)
- 10.17 Vendor Agreement extension with Bio Ridge Pharma, LLC dated July 19, 2013. (21)
- 10.18 Vendor Agreement extension with Bio Ridge Pharma, LLC and Armada Healthcare, LLC dated August 8, 2014.(22)
- 10.19 Sales, Marketing, Distribution, and Supply Agreement with Emerge Health Pty Ltd. dated March 9, 2015.(Confidential Treatment granted with respect to portions of the Agreement) (22)
- 10.20 August 4, 2015 Amendment to Equity Distribution Agreement between the registrant and Maxim Group LLC. (24)
- 10.21 Vendor Agreement extension with Armada Healthcare, LLC dated July 29, 2015. (26)
- 10.22 Vendor Agreement extension with Bio Ridge Pharma, LLC dated July 29, 2013. (26)
- 10.23 Early Access Agreement with Impatiens N.V. dated August 3, 2015.(Confidential Treatment granted with respect to portions of the Agreement) (27)
- 10.24 Sales, Marketing, Distribution, and Supply Agreement with Emerge Health Pty Ltd. dated August 6, 2015. (Confidential Treatment granted with respect to portions of the Agreement) (26)
- 10.25 Addendum to Early Access Agreement with Impatiens N.V. dated October 16, 2015.(Confidential Treatment granted with respect to portions of the Agreement) (27)
- 10.26 Letter agreement between Dr. Carter and the Company dated September 28, 2015 extending the period for notice of non-renewal to December 1, 2015 within the June 11, 2010 Amended and Restated Engagement Agreement entered into between the Company and Dr. Carter. (27)
- 10.27 November 23, 2015 William A. Carter Employment Agreement Waiver. (28)
- 10.28 November 23, 2015 Thomas K. Equels Employment Agreement Waiver. (28)
- 10.29 Equity Distribution Agreement, dated December 15, 2015 with Chardan Capital Markets, LLC. (29)
- 10.30 December 23, 2015 letter to Dr. Carter related to non-renewal of his consulting agreement and continued consulting services. (30)
- 10.31 2016 Senior Executive Deferred Cash Performance Award Plan. (31)
- 10.32 2016 Voluntary Incentive Stock Award Plan. (31)
- 10.33 Amended and Restated 2016 Senior Executive Deferred Cash Performance Award Plan. (32)
- 10.34 Sales, Marketing, Distribution and Supply Agreement (the "Agreement") with Scientific Products Pharmaceutical Co. LTD dated March 3, 2016 (Confidential Treatment granted with respect to portions of the Agreement). (34)
- 10.35 Agreement between Avrio Biopharmaceuticals ("Avrio") and the Company dated July 20, 2016 (Confidential Treatment granted with respect to portions of the Agreement). (36)
- 10.36 Licensing Agreement dated April 13, 2016 with Lonza Sales AG (Confidential Treatment granted with respect to portions of the Agreement). (37)
- 10.37 Form of Securities Purchase Agreement entered into on August 30, 2016. (38)
- 10.38 Amended and Restated Early Access Agreement with Impatiens N.V. dated May 20, 2016. (Confidential Treatment granted with respect to portions of the Agreement) (39)
- 10.39 December 13, 2016 Amendment No. 1 to Amended and Restated Early Access Agreement with Impatiens N.V. (23)
- 10.40 June 28, 2017 Amendment No. 2 to Amended and Restated Early Access Agreement with Impatiens N.V. (23)
- 10.41 February 14, 2018 Amendment No. 3 to Amended and Restated Early Access Agreement with Impatiens N.V. (23)
- 10.42 March 26, 2018 Amendment No. 4 to Amended and Restated Early Access Agreement with Impatiens N.V. (23)
- 10.43 Form of Securities Purchase Agreement entered into on February 1, 2017. (40)

- 10.44 August 2017 Form of Employee Pay Reduction Plan. (41)
- 10.45 August 2017 Form of Executive Compensation Deferral Plan. (41)
- 10.46 August 2017 Form of Directors' Compensation Deferral Plan. (41)
- 10.47 Form of August 2017 Agreement between the Company and the Warranholders. (42)
- 10.48 Form of June 2017 Agreement between the Company and the Warranholders. (43)
- 10.49 Mortgage and Security Agreement with SW Partners LLC dated May 12, 2017. (44)
- 10.50 Promissory Note with SW Partners LLC dated May 12, 2017. (44)
- 10.51 September 11, 2017 Purchase and Sale Agreement- 5 Jules Lane. (23)
- 10.52 January 8, 2018 Purchase and Sale Agreement- 783 Jersey Lane. (23)
- 10.53 Lease Agreement for 783 Jersey Lane. (23)
- 10.54 Form of Stock Purchase Agreement entered into on March 21, 2018. (45)
- 10.55 Form of Securities Purchase Agreement entered into on May 24, 2018. (46)
- 16.1 April 5, 2018 Letter from RSM US LLP. (47)
- 21.1 Subsidiaries.* *
- 23.1 RSM US LLP consent. *
- 23.2 Consent of Silverman Shin & Byrne PLLC, legal counsel (included in Exhibit 5.1).*
- 24.1 Powers of Attorney (included on Signature Pages to this Registration Statement)**.

* Filed herewith.

** Previously filed.

- (1) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed July 23, 2012 and is hereby incorporated by reference.
- (2) Filed with the Securities and Exchange Commission as an exhibit to the Company's Registration Statement on Form S-1 (No. 33-93314) filed November 2, 1995 and is hereby incorporated by reference.
- (3) Filed with the Securities and Exchange Commission as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed on September 16, 2011 and is hereby incorporated by reference.
- (4) Filed with the Securities and Exchange Commission as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed on June 27, 2016 and is hereby incorporated by reference.
- (5) Filed with the Securities and Exchange Commission on November 14, 2017 as an exhibit to the Company's Registration Statement on Form 8-A12B (No. 0-27072) and is hereby incorporated by reference.
- (6) Filed with the Securities and Exchange Commission as an exhibit to the Company's Form S-3 Registration Statement (No. 333-205228) on June 25, 2015 and is hereby incorporated by reference.
- (7) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 000-27072) for the year ended December 31, 2008 and is hereby incorporated by reference.

- (8) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended June 30, 2010 and is hereby incorporated by reference.
- (9) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 000-27072) for the year ended December 31, 2005 and is hereby incorporated by reference.
- (10) Filed with the Securities and Exchange Commission as an exhibit to the Company's Annual Report on Form 10-K (No. 000-27072) for the year ended December 31, 2009 and is hereby incorporated by reference.
- (11) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) dated June 15, 2010 and is hereby incorporated by reference.

- (12) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) dated May 28, 2010 and is hereby incorporated by reference.
- (13) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended March 31, 2011 and is hereby incorporated by reference.
- (14) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended September 30, 2011 and is hereby incorporated by reference.
- (15) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed September 23, 2011 and is hereby incorporated by reference.
- (16) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed December 12, 2011 and is hereby incorporated by reference.
- (17) Filed with the Securities and Exchange Commission as an exhibit to the Company's Annual Report on Form 10-K (No. 000-27072) for the year ended December 31, 2011 and is hereby incorporated by reference.
- (18) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed August 15, 2012 and is hereby incorporated by reference.
- (19) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended September 30, 2015 and is hereby incorporated by reference.
- (20) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended June 30, 2013 and is hereby incorporated by reference.
- (21) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 000-27072) for the year ended December 31, 2013 and is hereby incorporated by reference.
- (22) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 000-27072) for the year ended December 31, 2014 and is hereby incorporated by reference.
- (23) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 000-27072) for the year ended December 31, 2017 and is hereby incorporated by reference left blank.
- (24) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed June 23, 2015 and is hereby incorporated by reference.
- (25) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed August 4, 2015 and is hereby incorporated by reference.
- (26) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended June 30, 2015 and is hereby incorporated by reference.
- (27) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 1-13441) for the period ended September 30, 2015 and is hereby incorporated by reference.

- (28) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed November 23, 2015 and is hereby incorporated by reference.
- (29) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed December 15, 2015 and is hereby incorporated by reference.
- (30) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed January 14, 2016 and is hereby incorporated by reference.
- (31) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed February 4, 2016 and is hereby incorporated by reference.

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- (32) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 000-27072) filed March 1, 2016 and is hereby incorporated by reference.
- (33) Filed with the Securities and Exchange Commission as an exhibit to the Company's amended quarterly report on Form 10-Q/A (No. 000-27072) for the period ended September 30, 2011 and is hereby incorporated by reference.
- (34) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q for the period ended March 31, 2016 and is hereby incorporated by reference.
- (35) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed June 10, 2016 and is hereby incorporated by reference.
- (36) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q for the period ended June 30, 2016 and is hereby incorporated by reference.
- (37) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q/A for the period ended March 31, 2016 and is hereby incorporated by reference.
- (38) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed September 1, 2016 and is hereby incorporated by reference.
- (39) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K/A filed May 8, 2017 and is hereby incorporated by reference.
- (40) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed February 3, 2017 and is hereby incorporated by reference.
- (41) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed August 29, 2017 and is hereby incorporated by reference.
- (42) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed August 23, 2017 and is hereby incorporated by reference.
- (43) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed June 1, 2017 and is hereby incorporated by reference.
- (44) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 000-27072) for the period ended March 31, 2017 and is hereby incorporated by reference.
- (45) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed March 22, 2018 and is hereby incorporated by reference.
- (46) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed May 20, 2018 and is hereby incorporated by reference.
- (47) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K filed May 6, 2018 and is hereby incorporated by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this amendment No. 1 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Orlando, State of Florida, on July 19, 2018 .

HEMISPHERX
BIOPHARMA, INC.
(Registrant)

By: */s/ Thomas K. Equels*
Thomas K. Equels,
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this amendment No. 1 to the registration statement has been signed by the following persons in the capacities indicated on July 19 , 2018.

| Signature | Title |
|--|---|
| <i>/s/ Thomas K. Equels</i> Thomas K. Equels | Chief Executive Officer (Principal Executive) and Director |
| <i>/s/ Adam Pascale</i> Adam Pascale | Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) |
| * | Director (Chairman) |
| William M. Mitchell, M.D., Ph.D. | |
| * | Director |
| Stewart L. Appelrouth | |
| * By: <i>/s/ Thomas K. Equels</i> Thomas K. Equels, Attorney-in-Fact | |

