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

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**FORM S-3  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

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**HISTOGENICS CORPORATION**

(Exact name of registrant as specified in its charter)

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

**3842**  
(Primary Standard Industrial  
Classification Code Number)

**04-3522315**  
(I.R.S. Employer  
Identification Number)

**830 Winter Street, 3rd Floor  
Waltham, Massachusetts 02451  
(781) 547-7900**

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

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**Adam Gridley  
Chief Executive Officer  
Histogenics Corporation  
830 Winter Street, 3rd Floor  
Waltham, Massachusetts 02451  
(781) 547-7900**

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

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**Approximate date of commencement of proposed sale to public:** From time to time, after this Registration Statement is declared effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

### CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price(2)(5)	Amount of Registration Fee
Shares of Common Stock, par value \$0.01 per share	2,596,059	\$3.12	\$8,099,704.08	\$938.76
Shares of Common Stock, par value \$0.01 per share, underlying shares of Series A Convertible Preferred Stock(3)	10,737,275	\$3.12	\$33,500,298.00	\$3,882.69
Shares of Common Stock, par value \$0.01 per share, issuable upon exercise of warrants(4)	13,466,667	\$3.12	\$42,016,001.04	\$4,869.66
Total:	26,800,001	—	\$83,616,003.12	\$9,691.11

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the Securities Act), the shares offered hereby also include an 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 in accordance with Rule 457(c) of the Securities Act, based on the average of the high and low prices of the common stock of the registrant as reported on The NASDAQ Global Market on October 4, 2016.
- (3) Represents shares issuable upon conversion of shares of Series A Convertible Preferred Stock, with each share of Series A Convertible Preferred Stock having a stated value of \$1,000 per share and a fixed conversion price into shares of common stock of \$2.25 per share.
- (4) Represents shares issuable upon exercise of common stock warrants, at a fixed exercise price of \$2.25 per share.
- (5) We have calculated the proposed maximum aggregate offering price of the common stock underlying the Series A Convertible Preferred Stock and the common stock warrants based upon the Series A Convertible Preferred Stock converting at \$2.25 per share and the common stock warrants being exercisable to purchase common stock at a price per share equal to \$2.25.

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

**The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

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The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus 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 the selling stockholders named in this prospectus are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED OCTOBER 5, 2016

PRELIMINARY PROSPECTUS



**26,800,001 Shares of Common Stock**

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This prospectus relates to the resale by the selling stockholders identified in this prospectus of up to 2,596,059 shares of our common stock that we sold to certain of the selling stockholders, 10,737,275 shares of our common stock that are issuable upon the conversion of our Series A Convertible Preferred Stock that we sold to certain of the selling stockholders and 13,466,667 shares of common stock that are issuable upon the exercise of outstanding warrants to purchase our common stock issued to the selling stockholders in connection with a private placement completed on September 29, 2016.

We are not selling any shares of common stock and will not receive any proceeds from the sale of the shares under this prospectus. Upon the exercise of the warrants for 13,466,667 shares of our common stock by payment of cash, however, we will receive the exercise price of the warrants, which is \$2.25 per share, or an aggregate of approximately \$30,300,000.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholders will pay or assume brokerage commissions and similar charges, if any, incurred for the sale of shares of our common stock.

The selling stockholders identified in this prospectus, or their pledgees, donees, transferees or other successors-in-interest, may offer the shares 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. For additional information on the methods of sale that may be used by the selling stockholders, see the section entitled "Plan of Distribution" on page 20. For a list of the selling stockholders, see the section entitled "Selling Stockholders" on page 11.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Our common stock is traded on The NASDAQ Global Market under the symbol "HSGX." On October 4, 2016, the closing sale price of our common stock on The NASDAQ Global Market was \$3.15 per share. You are urged to obtain current market quotations for the common stock.

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**Investing in our common stock involves risks. See "[Risk Factors](#)" beginning on page 7.**

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and are eligible for reduced public company disclosure requirements.

**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.**

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The date of this prospectus is \_\_\_\_\_, 2016.

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## ABOUT THIS PROSPECTUS

This prospectus relates to the offering of our common stock. Before buying any of the common stock that the selling stockholders are offering, we urge you to carefully read this prospectus, any free writing prospectus that we have authorized for use in connection with this offering, and the information incorporated by reference as described under the headings “Where You Can Find More Information” and “Incorporation of Documents by Reference” in this prospectus. These documents contain important information you should consider when making your investment decision.

In this prospectus, as permitted by law, we “incorporate by reference” information from other documents that we file with the Securities and Exchange Commission (SEC). This means that we can disclose important information to you by referring to those documents. The information incorporated by reference is considered to be a part of this prospectus and should be read with the same care. When we make future filings with the SEC to update the information contained in documents that have been incorporated by reference, the information included or incorporated by reference in this prospectus is considered to be automatically updated and superseded. In other words, in case of a conflict or inconsistency between information contained in this prospectus and information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later.

**You should rely only on the information contained in, or incorporated by reference into, this prospectus and in any free writing prospectus that we have authorized for use in connection with this resale prospectus. We have not authorized any other person to provide you with different information. Neither we nor any selling stockholder is making an offer to sell or soliciting an offer to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus, the documents incorporated by reference into this prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations, and prospects may have changed since those dates.**

## PROSPECTUS SUMMARY

*This summary highlights information contained or incorporated by reference elsewhere in this prospectus. You should read the following summary together with the more detailed information appearing or incorporated by reference in this prospectus, including our consolidated financial statements and related notes, and in “Risk Factors” beginning on page 7, before deciding whether to purchase shares of our common stock. Unless the context otherwise requires, we use the terms “Histogenics,” the “company,” “we,” “us” and “our” in this prospectus to refer to Histogenics Corporation and its wholly owned subsidiaries.*

### Company Overview

Histogenics Corporation (we, our or Histogenics) is a regenerative medicine company focused on developing and commercializing products in the musculoskeletal segment of the marketplace. Our first product candidate, NeoCart<sup>®</sup>, utilizes various aspects of our regenerative medicine platform to develop an innovative tissue implant intended to treat tissue injury in the field of orthopedics, specifically cartilage damage in the knee. NeoCart is currently in a Phase 3 clinical trial in the United States under a special protocol assessment with the U.S. Food and Drug Administration (the FDA) for the treatment of knee cartilage damage. We believe that NeoCart is a disruptive therapy that has the potential to address many of the current challenges with the current treatment alternatives. NeoCart is a quick and easy procedure for the physician and may offer patients a more rapid and durable recovery, with fewer follow-on procedures. Joint, or articular, cartilage covers the ends of bones and allows for joints to glide smoothly with minimal friction. Cartilage damage, or chondral defects, can be caused by acute trauma, such as a bad fall or sports-related injury, or by repetitive trauma, such as general wear over time. Unlike other tissues in the body, joint cartilage has no innate ability to repair itself, making any injury permanent. Left untreated, even a small defect can expand in size and progress to debilitating arthritis, ultimately necessitating a joint replacement procedure.

Our regenerative medicine platform combines expertise in the following areas:

- Cell therapy and processing: the handling of a tissue biopsy and the extraction, isolation and expansion of the cells;
- Biomaterials and Scaffold: three-dimensional biomaterials structures that enable the proper distribution of cells and organize cells in their natural environment to support tissue formation;
- Tissue engineering: the use of a combination of cells, engineering and biomaterials to improve or replace biological functions; and
- Bioadhesives: natural, biocompatible materials that act as adhesives for biological tissue and allow for natural cell and tissue infiltration and integration with native cells.

We have devoted substantially all of our resources to the development of our regenerative medicine platform, the preclinical and clinical advancement of our product candidates, the creation and protection of related intellectual property and the provision of general and administrative support for these operations. We have generated revenue from the sale of products we no longer sell, collaboration activities and grants. We have funded our operations primarily through the private placement of preferred stock and convertible promissory notes, through commercial bank debt and the proceeds of our initial public offering.

We have never been profitable and have incurred net losses in each year since inception. Our accumulated deficit was \$181.5 million as of June 30, 2016. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. Our net losses may fluctuate significantly from quarter to quarter and year to year. We expect to continue to incur significant expenses and operating losses in connection with our ongoing activities as we:

- conduct clinical trials of our product candidates;

- continue scale up and improvement of our manufacturing processes;
- continue with our manufacturing technology transfer;
- continue our research and development efforts;
- manufacture preclinical study and clinical trial materials;
- hire additional clinical, quality control and technical personnel to conduct our clinical trials and prepare a Biologics License Application for submission to the FDA;
- hire additional scientific personnel to support our product development efforts;
- maintain, expand and protect our intellectual property portfolio;
- seek regulatory approvals for our product candidates that successfully complete clinical trials;
- implement operational, financial and management systems; and
- hire additional personnel to continue to operate as a public company.

We do not expect to generate any future revenue from product sales until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Accordingly, we will seek to fund our operations through public or private equity or debt financings or other sources. However, we may be unable to raise additional funds or enter into such other arrangements when needed, on favorable terms, or at all. Our failure to raise capital or enter into such other arrangements when needed would have a negative impact on our financial condition and ability to develop our product candidates.

### **Risks Related to Our Business**

An investment in our common stock involves a high degree of risk. Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled “Risk Factors.” These risks represent challenges to the successful implementation of our strategy and to the growth and future profitability of our business. Some of these risks include the following:

- We are a clinical-stage regenerative medicine company with a limited operating history of developing late-stage product candidates. There is a limited amount of information about us upon which to evaluate our product candidates and business prospects, making an investment in our common stock unsuitable for many investors.
- If we encounter difficulties enrolling patients in our clinical trials, including our NeoCart Phase 3 clinical trial, our clinical development activities could be delayed or otherwise adversely affected.
- Failure to obtain, or any delay in obtaining, FDA approval regarding the comparability of critical NeoCart raw materials following our technology transfer and manufacturing location transition may have an adverse effect on our business, operating results and prospects.
- We are heavily dependent on the success of our lead product candidate NeoCart, which is still under development in a Phase 3 clinical trial. If we are unable to commercialize NeoCart in the future, or experience significant delays due to manufacturing or otherwise in doing so, our business will be materially harmed.
- We have incurred significant losses since our inception and anticipate that we will continue to incur substantial losses for the next several years.
- NeoCart and our future product candidates are subject to extensive regulation, compliance with which is costly and time consuming, may cause unanticipated delays or prevent the receipt of the approvals required to commercialize NeoCart and our future product candidates.
- If we fail to complete clinical trials and obtain regulatory approval for NeoCart, our business would be significantly harmed.

- Our clinical development of NeoCart could be substantially delayed if the FDA requires us to conduct additional studies or trials or imposes other requirements or restrictions.
- We are subject to numerous U.S. federal and state laws pertaining to health care fraud and abuse, including anti-kickback, self-referral, false claims and fraud laws, and any violation by us of such laws could result in fines or other penalties.
- Our failure to comply with extensive governmental regulation may significantly affect our operating results.
- Our success depends on our ability to protect our intellectual property and our proprietary technologies.
- If we or any of our future development or collaborative partners are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation could have a material adverse effect on our business.

For further discussion of these and other risks you should consider before making an investment in our common stock, see the section titled “Risk Factors” beginning on page 7 of this prospectus.

### **Our Corporate Information**

We were originally incorporated as a Massachusetts corporation in 2000. In 2006, we underwent a corporate reorganization pursuant to which we were incorporated as a Delaware corporation. Our principal offices are located at 830 Winter Street, 3rd Floor, Waltham, Massachusetts 02451, and our telephone number is (781) 547-7900. Our website address is [www.histogenics.com](http://www.histogenics.com). Our website and the information contained on, or that can be accessed through, our website shall not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on any such information in making your decision whether to purchase our common stock.

### **Implications of Being an Emerging Growth Company**

As a company with less than \$1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act. An emerging growth company may take advantage of specified reduced reporting and other reduced burdens that are otherwise applicable generally to public companies. These provisions include:

- we may present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations;
- we are currently exempt from the requirement to obtain an attestation and report from our auditors on our internal control over financial reporting pursuant to the Sarbanes-Oxley Act;
- we are permitted to provide less extensive disclosure about our executive compensation arrangements; and
- we are not required to give our stockholders non-binding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of these provisions until December 31, 2019 (the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to our initial public offering) or until such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than \$1.0 billion in annual revenue, have more than \$700 million in market value of our capital stock held by non-affiliates, or issue more than \$1.0 billion of non-convertible debt over a three-year period. We have chosen to take advantage of some of these reduced burdens and, as such, the information that we provide stockholders may be different than you may receive from other public companies in which you hold equity interests.



### SUMMARY OF PRIVATE PLACEMENT

On September 29, 2016 (the Closing Date), we completed a private placement (the Private Placement) pursuant to a securities purchase agreement (the Securities Purchase Agreement) of 2,596,059 shares of common stock, \$0.01 par value per share, 24,158.8693 shares of Series A Convertible Preferred Stock, \$0.01 par value per share (convertible into 10,737,275 shares of Common Stock), and warrants (the Purchase Warrants) to purchase 13,333,334 shares of our common stock at an exercise price per share of \$2.25, with a term of five years following receipt of the stockholder approval required under the Securities Purchase Agreement. The sale of the securities pursuant to the Securities Purchase Agreement resulted in gross proceeds of approximately \$30.0 million and net proceeds of approximately \$27.7 million. H.C. Wainwright & Co., LLC (HCW) served as the sole placement agent for the Private Placement. We also issued HCW and its designees warrants (the HCW Warrants and, together with the Purchase Warrants, the Common Stock Warrants) for the purchase of 133,333 shares of common stock at an exercise price of \$2.25 per share and exercisable for a period of five years following receipt of the stockholder approval required under the Securities Purchase Agreement and pursuant to the terms of our letter agreement with HCW.

We are using the proceeds from the Private Placement for working capital and general corporate purposes. As part of the Private Placement, we entered into a registration rights agreement with the purchasers and HCW pursuant to which we agreed to file a registration statement to register for resale the shares of common stock sold and issued in the Private Placement, including the shares of Common Stock underlying the shares of Series A Convertible Preferred Stock and Common Stock Warrants sold in the Private Placement, within 30 days following the signing of the Securities Purchase Agreement. We are required to use our reasonable best efforts to cause the registration statement to be declared effective under the Securities Act of 1933, as amended (the Securities Act), as soon as practicable, but in no event later than 75 days after the signing of the Securities Purchase Agreement (or 110 days in the event of a full review of the registration statement by the Securities and Exchange Commission). We agreed to keep the registration statement effective until all registrable securities may be sold pursuant to Rule 144 under the Securities Act, without the need for current public information or other restriction. The issuance of the shares of common stock, the Series A Convertible Preferred Stock and the Common Stock Warrants in connection with the Private Placement was exempt from registration under the Securities Act pursuant to the exemption for transactions by an issuer not involving a public offering under Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

## THE OFFERING

Common stock offered by the selling stockholders	Up to 26,800,001 shares, including 10,737,275 shares of our common stock issuable upon conversion of shares of our Series A Convertible Preferred Stock and 13,466,667 shares of our common stock issuable upon exercise of warrants at an exercise price of \$2.25 per share.
Common stock outstanding	15,871,965 shares.
Use of proceeds	We will not receive any proceeds from the sale of shares in this offering, but we will receive the exercise price of the warrants at the time of exercise, which is \$2.25 per share.
Risk Factors	You should read the “Risk Factors” section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
NASDAQ Global Market symbol	“HSGX”

The number of shares of our common stock outstanding is based on 15,871,965 shares of our common stock outstanding as of September 29, 2016 and excludes the following (in each case, as of September 29, 2016):

- 1,349,081 shares issuable upon the exercise of options, with a weighted average exercise price of \$6.70 per share;
- 349,238 shares reserved for issuance under our 2013 Equity Incentive Plan (subject to automatic annual adjustment in accordance with the terms of the plan);
- 155,497 shares reserved for issuance under our 2013 Employee Stock Purchase Plan (subject to automatic annual adjustment in accordance with the terms of the plan);
- 13,638,909 shares issuable upon exercise of warrants exercisable for shares of our common stock, including 13,466,667 shares of our common stock issuable upon exercise of warrants issued in the Private Placement; and
- 10,737,275 shares of our common stock issuable upon conversion of shares of our Series A Convertible Preferred Stock issued upon the closing of the Private Placement.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options, warrants or purchase rights under our 2013 Employee Stock Purchase Plan and no conversion of the Series A Convertible Preferred Stock described above.

## **RISK FACTORS**

Investing in shares of our common stock involves risk. Before making any investment decision, you should carefully consider the risk factors under the caption “Risk Factors” in our most recent annual report on Form 10-K for the year ended December 31, 2015 and our most recent quarterly report on Form 10-Q for the quarter ended June 30, 2016, and our subsequent quarterly reports on Form 10-Q, which are incorporated by reference in this prospectus, as well as in any applicable prospectus supplement, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended (the Exchange Act). These risks could materially affect our business, results of operation or financial condition and affect the value of our common stock. Additional risks and uncertainties that are not yet identified may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment. For more information, see “Where You Can Find More Information.”

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve risks and uncertainties. The forward-looking statements are contained principally in “Summary” and “Risk Factors.” In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “anticipate,” “project,” “target,” “design,” “estimate,” “predict,” “potential,” “plan” or the negative of these terms, and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Forward-looking statements include, but are not limited to, statements about:

- the timing of enrollment, commencement and completion of our clinical trials;
- the timing, results and success of preclinical studies and clinical trials conducted by us and our development partners;
- our need for additional financing and our ability to raise additional funds on commercially reasonable terms;
- our securities’ or industry analysts’ expectations regarding the timing and success of enrollment in our clinical trials;
- the scope, progress and costs of developing and commercializing our product candidates;
- our expectations regarding our expenses and revenues, the sufficiency of our cash resources, the timing of our future profitability;
- our technology manufacturing location and partners;
- our ability to adequately manufacture our product candidates and the raw materials utilized therein;
- the ability to obtain and maintain regulatory approval of our product candidates and the labeling for any approved products;
- our ability to obtain and maintain intellectual property protection for our product candidates and our regenerative medicine platform;
- our expectations regarding competition;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of reimbursement and market acceptance of any of our product candidates;
- our anticipated growth strategies;
- the anticipated trends and challenges in our business and the market in which we operate;
- our ability to establish and maintain development partnerships;
- our ability to attract or retain key personnel;
- our ability to operate our business in compliance with the covenants and restrictions that we are subject to under our loan and security agreement;
- regulatory developments in the United States and foreign countries; and
- our plans for the use of our cash and cash equivalents.

Other factors 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.

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Any forward-looking statement made by us in this prospectus speaks only as of the date on which it is made. Except as required by law, we assume no obligation to update these statements publicly, or to update the reasons actual results could differ materially from those anticipated in these statements, even if new information becomes available in the future.

We discuss many of these risks in this prospectus in greater detail under the heading “Risk Factors.” Also, these forward-looking statements represent our estimates and assumptions only as of the date of this prospectus.

Unless required by United States federal securities laws, we do not intend to update any of these forward-looking statements to reflect circumstances or events that occur after the statement is made.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

## USE OF PROCEEDS

We are filing the registration statement of which this prospectus is a part to permit holders of the shares of our common stock, Series A Convertible Preferred Stock and Common Stock Warrants described in the section entitled "Selling Stockholders" to resell such shares of common stock and the shares of our common stock issuable upon the conversion of our Series A Convertible Preferred Stock or exercise of the Common Stock Warrants. We will not receive any proceeds from the resale of any shares of common stock offered by this prospectus by the selling stockholders. Upon the exercise of the Common Stock Warrants for up to an aggregate of 13,466,667 shares of our common stock by payment of cash, however, we will receive the exercise price of such warrants, which is \$2.25 per share, for an aggregate amount of approximately \$30,300,000. The Common Stock Warrants will not, upon the effectiveness of the registration statement of which this prospectus is a part, be eligible for cashless-exercise treatment. We plan to use any cash received from the exercise of the Common Stock Warrants for the funding of our research and development programs and otherwise for general corporate purposes.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by such selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by such selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, NASDAQ Global Market listing fees and fees and expenses of our counsel and our auditors.

## SELLING STOCKHOLDERS

The common stock being offered by the selling stockholders are those previously issued to the selling stockholders, and those issuable to the selling stockholders upon conversion of the Series A Convertible Preferred Stock and the Common Stock Warrants. For additional information regarding the issuances of those securities, see “Summary of Private Placement” above. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time. Except for the sale and issuance of the shares of common stock, the Series A Convertible Preferred Stock and the Common Stock Warrants, the selling stockholders have not had any material relationship with us within the past three years, other than (i) Wilmslow Estates Limited which is a greater than 10% holder of our common stock and an affiliate of Michael Lewis, a member of our Board of Directors, (ii) The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Sarah Hoffman Rakin, The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Julia Hoffman Rakin and the Kevin L Rakin Irrevocable Trust which are each affiliates of Kevin Rakin, a member of our Board of Directors, (iii) Split Rock Partners II, LP which is a greater than 10% holder of our common stock and (iv) the HCW Warrants have been issued to HCW and its designees, which served as the placement agent for the Private Placement. HCW is registered under the Exchange Act as a broker-dealer. Other than HCW, to our knowledge, none of the selling stockholders listed below are broker-dealers. HCW and its designees received securities as compensation in connection with the Private Placement described herein. Other than Michael Vasinkevich, Sean Hagerty, Michael Mirsky, Noam Rubinstein, Mark Viklund and Charles Worthman, to our knowledge, none of the selling stockholders are affiliates of broker-dealers. Each of Michael Vasinkevich, Sean Hagerty, Michael Mirsky, Noam Rubinstein, Mark Viklund and Charles Worthman represented to us that they purchased or received the securities in the ordinary course of business and at the time of purchase, had no agreements or understandings, directly or indirectly, with any person to distribute the securities.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock by each of the selling stockholders. The second column lists the number of shares of common stock beneficially owned by each selling stockholders, based on its ownership of the shares of common stock, Series A Convertible Preferred Stock and Common Stock Warrants, as of the Closing Date, assuming exercise of the Common Stock Warrants and conversion of the Series A Convertible Preferred Stock held by the selling stockholders on that date, without regard to any limitations on conversions or exercises.

The third column lists the shares of common stock being offered by this prospectus by the selling stockholders.

In accordance with the terms of a registration rights agreement with the selling stockholders, this prospectus generally covers the resale of the sum of (i) the number of shares of common stock issued to the selling stockholders in the Private Placement, (ii) the maximum number of shares of common stock issuable upon exercise of the related Common Stock Warrants and (iii) the maximum number of shares of common stock issuable upon conversion of the shares of our Series A Convertible Preferred Stock, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the registration right agreement, without regard to any limitations on the exercise of the warrants or conversion of the Series A Convertible Preferred Stock. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Until the date that our stockholders approve the Private Placement, (i) the Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock (the Certificate of Designation) limits the number of shares of common stock issuable upon conversion of the Series A Preferred Stock such that, when aggregated with the shares of common stock issued at the closing of the Private Placement, such issuances will not exceed 20% of our issued and outstanding common stock, as required by the rules and regulations of The NASDAQ Global Market and (ii) the warrant agreements restrict the exercise of the Common Stock Warrants.

Under the terms of the Common Stock Warrants, certain of the selling stockholders, at their election, may not exercise the Common Stock to the extent such exercise would cause such selling stockholders, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed

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4.99% of our then outstanding common stock following such exercise (subject to adjustment up to 9.99% upon the fulfillment of certain conditions), excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. In addition, our shares of Series A Convertible Preferred Stock may not be converted by certain of the selling stockholders, at their election, if such conversion would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock that would exceed 4.99% of our then outstanding common stock following such conversion (subject to adjustment up to 9.99% upon the fulfillment of certain conditions). The number of shares in the second column does not reflect the limitations set forth in this paragraph and the immediately preceding paragraph. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

<b>Name of Selling Stockholder</b>	<b>Number of Shares of Common Stock Owned Prior to Offering(1)</b>	<b>Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus(1)</b>	<b>Number of Shares of Common Stock Owned After Offering(2)</b>
Sabby Healthcare Master Fund, Ltd.	4,486,648(3)	4,486,648(3)	42,204
Sabby Volatility Warrant Master Fund, Ltd.	2,672,622(4)	2,672,622(4)	5,954
Empery Asset Master, Ltd	760,580(5)	760,580(5)	0
Empery Tax Efficient, LP	391,792(6)	391,792(6)	0
Empery Tax Efficient II, LP	625,404(7)	625,404(7)	0
Perceptive Life Sciences Master Fund LTD	3,555,554(8)	3,555,554(8)	0
Armistice Capital Master Fund, Ltd.	2,666,666(9)	2,666,666(9)	0
Abingworth Bioequities Master Fund LTD	1,351,112(10)	1,351,112(10)	0
Abingworth Bioventures VI LP	426,666(11)	426,666(11)	0
Laurence Lytton	1,777,778(12)	1,777,778(12)	0
Pura Vida Master Fund, Ltd.	444,444(13)	444,444(13)	0
Split Rock Partners II, LP	4,166,382(14)	2,781,688(14)	1,384,694
Wilmslow Estates Limited	4,316,554(15)	2,488,888(15)	1,827,666
BMV Direct LP	1,386,009(16)	1,111,112(16)	274,897
Ian Rosenberg	116,011(17)	67,556(17)	48,455
The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Sarah Hoffman Rakin	66,666(18)	66,666(18)	0
The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Julia Hoffman Rakin	66,666(18)	66,666(18)	0
Kevin L Rakin Irrevocable Trust	272,641(19)	222,222(19)	50,419
H.C. Wainwright & Co., LLC	525,429(20)	525,429(20)	0
Noam Rubinstein	283,333(21)	283,333(21)	0
Charles Worthman	1,333(22)	1,333(22)	0
Michael Mirsky	6,333(23)	6,333(23)	0
Sean Hagerty	19,000(24)	19,000(24)	0
Michael Vasinkevich	46,000(25)	46,000(25)	0
Mark Viklund	2,667(26)	2,667(26)	0

- (1) Assumes the exercise for cash of all of the warrants and conversion of all shares of our Series A Convertible Preferred Stock at the original conversion price of \$2.25 per share, irrespective of limitations on exercise or conversion, as applicable.
- (2) Represents the number of shares of common stock that will be beneficially owned by the selling stockholder after completion of this offering based on the assumptions that (i) all of the shares of common stock registered for resale by the registration statement of which this prospectus is a part will be sold and (ii) no other shares of common stock will be acquired or sold by the selling stockholder before completion of this offering. However, the selling stockholder may sell all, part or none of its shares of common stock offered pursuant to this prospectus and may sell all, part or none of its common stock pursuant to one or more exemptions from the registration provisions of the Securities Act.
- (3) Includes (i) 1,815,897 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 2,222,222 shares of common stock issuable upon the exercise of a Common Stock Warrant. This stockholder has indicated that Hal Mintz has voting and investment power over the shares



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held by it. This stockholder has indicated that Sabby Management, LLC serves as its investment manager, that Mr. Mintz is the manager of Sabby Management, LLC, and that each of Sabby Management, LLC and Mr. Mintz disclaim beneficial ownership over these shares except to the extent of any pecuniary interest therein. The selling stockholder's address is c/o Sabby Management, LLC, 10 Mountainview Road, Suite 205, Upper Saddle River, NJ 07458.

- (4) Includes (i) 1,089,539 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 1,333,334 shares of common stock issuable upon the exercise of a Common Stock Warrant. This stockholder has indicated that Hal Mintz has voting and investment power over the shares held by it. This stockholder has indicated that Sabby Management, LLC serves as its investment manager, that Mr. Mintz is the manager of Sabby Management, LLC, and that each of Sabby Management, LLC and Mr. Mintz disclaim beneficial ownership over these shares except to the extent of any pecuniary interest therein. The address for Sabby Volatility Warrant Master Fund, Ltd. is c/o Sabby Management, LLC, 10 Mountainview Road, Suite 205, Upper Saddle River, NJ 07458.
- (5) Includes (i) 304,606 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 380,290 shares of common stock issuable upon the exercise of a Common Stock Warrant. Empery Asset Management LP, the authorized agent of Empery Asset Master Ltd (EAM), has discretionary authority to vote and dispose of the securities held by EAM and may be deemed to be the beneficial owner of these securities. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the securities held by EAM. EAM, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these securities. The selling stockholder's address is c/o Empery Asset Management, LP, 1 Rockefeller Plaza, Suite 1205, New York, NY, 10020.
- (6) Includes (i) 156,909 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 195,896 shares of common stock issuable upon the exercise of a Common Stock Warrant. Empery Asset Management LP, the authorized agent of Empery Tax Efficient, LP (ETE), has discretionary authority to vote and dispose of the securities held by ETE and may be deemed to be the beneficial owner of these securities. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the securities held by ETE, ETE, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these securities. The selling stockholder's address is c/o Empery Asset Management, LP, 1 Rockefeller Plaza, Suite 1205, New York, NY, 10020.
- (7) Includes (i) 250,469 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 312,702 shares of common stock issuable upon the exercise of a Common Stock Warrant. Empery Asset Management LP, the authorized agent of Empery Tax Efficient II, LP (ETE II), has discretionary authority to vote and dispose of the securities held by ETE II and may be deemed to be the beneficial owner of these securities. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the securities held by ETE II. ETE II, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these securities. The selling stockholder's address is c/o Empery Asset Management, LP, 1 Rockefeller Plaza, Suite 1205, New York, NY, 10020.
- (8) Includes (i) 1,423,970 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 1,777,777 shares of common stock issuable upon the exercise of a Common Stock Warrant. Joseph E. Edelman as the General Partner of Perceptive Advisors which is the investment advisor of Perceptive Life Sciences Master Fund, Ltd. has voting and investment power over the shares owned by Perceptive Life Sciences Master Fund, Ltd. The selling stockholder's address is Perceptive Advisors LLC, 51 Astor Place, 10th Floor New York, NY 10003.
- (9) Includes (i) 1,067,978 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 1,333,333 shares of common stock issuable upon the exercise of a Common Stock Warrant. Armistice Capital, LLC is an investment manager to Armistice Capital Master Fund, Ltd. and Steven J. Boyd, the chief investment officer of Armistice Capital, LLC, may be deemed to have voting and investment power with respect to the securities held by Armistice Capital Master Fund Ltd. The selling stockholder's address is c/o Armistice Capital, LLC, 510 Madison Ave; 22nd Floor New York, NY 10022.
- (10) Includes (i) 541,109 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 675,556 shares of common stock issuable upon the exercise of a Common Stock

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Warrant. Abingworth LLP is the manager of the selling stockholder and disclaims beneficial ownership of the securities held by Abingworth Bioequities Master Fund Ltd., except to the extent of its actual pecuniary interest therein. The selling stockholder's address is c/o Abingworth LLP, Princes House 38 Jermyn Street, London SW1Y 6DN, United Kingdom.

- (11) Includes (i) 170,876 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 213,333 shares of common stock issuable upon the exercise of a Common Stock Warrant. Abingworth Bioventures VI GP LP, a Scottish limited partnership, serves as the general partner of the selling stockholder (ABV VI). Abingworth General Partner VI LLP, an English limited liability partnership, serves as the general partner of Abingworth Bioventures VI GP LP. ABV VI (acting by its general partner Abingworth Bioventures VI GP LP, acting by its general partner Abingworth General Partner VI LLP) has delegated to Abingworth LLP, an English limited liability partnership, all investment and dispositive power over the securities held by ABV VI. An investment committee of Abingworth LLP, comprised of Stephen W. Bunting, Timothy Haines, Kurt von Emster and Genghis Lloyd-Harris, approves investment and voting decisions by a majority vote, and no individual member has the sole control or voting power over the securities held by ABV VI. Each of Abingworth Bioventures VI GP LP, Abingworth General Partner VI LLP, Mr. von Emster, Dr. Bunting, Mr. Haines and Dr. Lloyd-Harris disclaims beneficial ownership of these shares, except to the extent of their pecuniary interest in such shares. The principal address of each of the entities and individuals listed above is c/o Abingworth LLP, Princes House, 38 Jermyn Street, London, England SW1Y 6DN.
- (12) Includes (i) 711,985 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 888,889 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 467 Central Park West 17-A New York, NY 10025.
- (13) Includes (i) 177,996 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 222,222 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 888 Seventh Avenue, 6th Floor, New York, NY 10106.
- (14) Includes (i) 1,114,043 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 1,390,844 shares of common stock issuable upon the exercise of a Common Stock Warrant. Voting and investment power over the shares is delegated to Split Rock Partners II Management, LLC, the general partner of Split Rock Partners II, LP. Split Rock Partners II Management, LLC has delegated voting and investment decisions to three individuals who require a two-thirds vote to act. Split Rock Partners II Management, LLC disclaims beneficial ownership of the shares except to the extent of any pecuniary interest. The selling stockholder's address is 10400 Viking Drive, Suite 250 Eden Prairie, MN 55344.
- (15) Includes (i) 996,779 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 1,244,444 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's economic interest is ultimately owned by a family discretionary trust associated with Michael Lewis. The selling stockholder has sole voting and investment power over the shares of capital stock it owns. The selling stockholder's address is No 2 The Forum, Grenville Street, St Helier, JE1 4HH.
- (16) Includes (i) 444,991 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 555,556 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is BMV Direct LP, 17190 Bernardo Center Drive, San Diego, CA 92128, Attn: Legal Department.
- (17) Includes (i) 27,056 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 33,778 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 4712 Spyglass Drive, Dallas, Texas 75287.
- (18) Includes (i) 26,699 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 33,333 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 36 Church Lane, Westport, CT 06880.
- (19) Includes (i) 88,998 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 111,111 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 36 Church Lane, Westport, CT 06880.

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- (20) Includes (i) 193,878 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 283,381 shares of common stock issuable upon the exercise of a Common Stock Warrant. This stockholder has indicated that Michael Vasinkevich has voting and investment power over the shares held by Wainwright. As such, Mr. Vasinkevich may be deemed to have beneficial ownership over these shares. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (21) Includes (i) 106,798 shares of common stock issuable upon conversion of shares of Series A Convertible Preferred Stock and (ii) 150,000 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (22) Includes 1,333 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (23) Includes 6,333 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (24) Includes 19,000 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (25) Includes 46,000 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.
- (26) Includes 2,667 shares of common stock issuable upon the exercise of a Common Stock Warrant. The selling stockholder's address is 430 Park Avenue, 4th Floor, New York, NY 10022.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information known to us regarding beneficial ownership of our common stock as of September 30, 2016 by:

- each person, or group of affiliated persons, who is known by us to beneficially own more than five percent of our outstanding common stock;
- each of our named executive officers;
- each of our directors; and
- all of our current directors and executive officers as a group.

Applicable percentage ownership is based on 15,871,965 shares of common stock outstanding as of September 30, 2016.

The table below is based upon information supplied by executive officers, directors and principal stockholders and Schedule 13Gs and 13Ds filed with the SEC through September 30, 2016.

Under the terms of the Common Stock Warrants, following stockholder approval of the Private Placement, certain of the Common Stock Warrant holders, at their election, may not exercise the Common Stock Warrants to the extent such exercise would cause such holder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 4.99% of our then outstanding common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the a Common Stock Warrant which have not been exercised. In addition, following stockholder approval, our shares of Series A Convertible Preferred Stock may not be converted by certain holders thereof, at their election, if such conversion would cause such holder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock that would exceed 4.99% of our then outstanding common stock following such conversion (subject to adjustment up to 9.99% upon the fulfillment of certain conditions). Certain disclosures in the footnotes to the table below concerning the stockholders' beneficial ownership percentage assuming the conversion of our shares of Series A Convertible Preferred Stock and exercise of warrants issued in the Private Placement do not reflect these limitations.

In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options and restricted stock held by that person or entity that are currently exercisable or releasable or that will become exercisable or releasable within 60 days of September 30, 2016. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the principal address of each of the stockholders below is c/o Histogenics Corporation, 830 Winter Street, 3rd Floor, Waltham, Massachusetts 02451.

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<u>Name and Address of Beneficial Owner</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Shares Beneficially Owned</u>
<b><u>5% Stockholders</u></b>		
Intrexon Corporation(1) 20374 Seneca Meadows Parkway, Germantown, MD 20876	2,690,570	17.0%
Wilmslow Estates Limited(2) c/o Stonehage Group 2 The Forum, Grenville Street St Helier, Jersey, Channel Islands JE1 4HH	2,075,331	13.1%
Sofinnova Venture Partners VIII, L.P.(3) 3000 Sand Hill Road, Bldg 4 Suite 250 Menlo Park, CA 94025	2,077,040	13.1%
FMR, LLC(4) 245 Summer Street Boston, MA 02210	1,913,520	12.1%
Split Rock Partners II, LP(5) 10400 Viking Drive, Suite 250 Eden Prairie, MN 55344	1,661,495	10.5%
<b><u>Directors and Named Executive Officers</u></b>		
Joshua Baltzell(6)	20,000	*
David Gill(7)	14,500	*
John H. Johnson(8)	27,416	*
Garheng Kong, M.D., Ph.D. (9)	20,000	*
Michael Lewis(10)	2,095,331	13.2%
Kevin Rakin(11)	109,101	*
Adam Gridley(12)	219,033	1.4%
Stephen Kennedy(13)	73,832	*
Gloria Matthews, DVM, Ph.D., DACVS(14)	50,000	*
Jonathan Lieber(15)	46,666	*
All current executive officers and directors as a group (10 persons) (16)	2,392,833	14.6%

\* Less than one percent of the outstanding shares of common stock.

- (1) Randal J. Kirk, directly and through certain affiliates, has voting and dispositive power over a majority of the outstanding capital stock of Intrexon. Mr. Kirk may therefore be deemed to have voting and dispositive power over the shares of Histogenics owned by Intrexon. Shares held by Intrexon may be deemed to be indirectly beneficially owned (as defined under Rule 13d-3 promulgated under the Exchange Act) by Mr. Kirk. Mr. Kirk disclaims beneficial ownership of such shares, except to the extent of any pecuniary interest therein. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 6.7%.
- (2) Wilmslow's economic interest is ultimately owned by a family discretionary trust associated with Michael Lewis, who is referenced in footnote 10 below. Wilmslow has sole voting and investment power over the shares of capital stock owned. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 10.8%.

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- (3) Sofinnova Management VIII, L.L.C. (SM VIII) is the general partner of Sofinnova Venture Partners VIII, L.P. (SVP VIII) and Anand Mehra, Michael Powell, Srinivas Akkarju and James I. Healy, are the managing members of SM VIII (Managing Members). SVP VIII, SM VIII and the Managing Members may be deemed to have shared voting and dispositive power over the shares owned by SVP VIII. Such persons and entities disclaim beneficial ownership over the shares owned by SVP VIII except to the extent of any pecuniary interest therein. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 5.2%.
- (4) Based on Schedule 13G/A filed with the SEC on February 12, 2016 by FMR LLC on behalf of itself and Abigail P. Johnson, the Director, the Vice Chairman, the Chief Executive Officer and the President of FMR LLC, members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act (Fidelity Funds) advised by Fidelity Management & Research Company, a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 4.8%.
- (5) Voting and investment power over the shares is delegated to Split Rock Partners II Management, LLC, the general partner of Split Rock Partners II, LP. Split Rock Partners II Management, LLC has delegated voting and investment decisions to three individuals who require a two-thirds vote to act. Split Rock Partners II Management, LLC disclaims beneficial ownership of the shares except to the extent of any pecuniary interest. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 10.4%.
- (6) Includes 20,000 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (7) Includes 14,500 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (8) Includes 27,416 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (9) Includes 20,000 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (10) Mr. Lewis is the settlor of the trust which ultimately owns the economic interest in Wilmslow referenced in footnote 2 above. Mr. Lewis has no beneficial interest in the trust which ultimately owns the economic interest in Wilmslow, but other members of his family are discretionary beneficiaries in such trust. To the extent Mr. Lewis may be deemed to hold an indirect beneficial interest under applicable United States securities laws, Mr. Lewis disclaims such beneficial ownership. Includes 20,000 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal 10.8%.

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- (11) Includes (i) 36,908 shares of common stock owned by the Kevin L. Rakin Irrevocable Trust, (ii) 6,634 shares of common stock owned by The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Sarah Hoffman Rakin and (iii) 6,634 shares of common stock owned by The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Julia Hoffman Rakin. Mr. Rakin disclaims beneficial ownership in the foregoing shares of common stock. Also includes 23,301 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (12) Includes 219,033 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, this stockholder's beneficial ownership of all outstanding shares of common stock would equal less than one percent.
- (13) Includes 73,832 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (14) Includes 50,000 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (15) Includes 46,666 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016.
- (16) Includes 514,748 shares of common stock issuable upon exercise of options exercisable within 60 days of September 30, 2016 and (i) 36,908 shares of common stock owned by the Kevin L. Rakin Irrevocable Trust, (ii) 6,634 shares of common stock owned by The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Sarah Hoffman Rakin and (iii) 6,634 shares of common stock owned by The Alison N Hoffman and Kevin L Rakin Irrevocable Trust For Julia Hoffman Rakin, of which Mr. Rakin disclaims any beneficial ownership in. Assuming the conversion to common stock of all warrants and all shares of Series A Convertible Preferred Stock issued in the Private Placement, all current directors and executive officers would in the aggregate have beneficial ownership of 12.5% of our total outstanding shares of common stock.

## PLAN OF DISTRIBUTION

Each selling stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the principal trading market or any other stock exchange, market or trading facility on which the securities are 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 the securities 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 securities at a stipulated price per security;
- 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 securities 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 securities, 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 the securities or interests 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 the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. 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 securities offered by this prospectus, which securities 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 securities 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 securities 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 securities.



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We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. 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 securities 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. The selling stockholders have advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the selling stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities 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).

## DESCRIPTION OF CAPITAL STOCK

### General

We are authorized to issue 100,000,000 shares of common stock, par value \$0.01 per share, and 10,000,000 shares of preferred stock, par value \$0.01 per share, 30,000 of which have been designated as Series A Convertible Preferred Stock pursuant to the Certificate of Designation. This description does not purport to be complete and is qualified in its entirety by the provisions of our sixth amended and restated certificate of incorporation, the Certificate of Designation and our amended and restated bylaws, copies of which have been filed with the SEC.

In addition to the descriptions set forth below, please refer to our other publicly filed documents incorporated herein by reference, which describe our other outstanding warrants, registration rights, equity incentive plans and other securities.

### Common Stock

Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of the stockholders, including the election of directors. Our sixth amended and restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. At present, we have no plans to issue dividends and have never issued any dividends.

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

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

### Series A Convertible Preferred Stock

In September 2016 we created a new class of preferred stock designated as Series A Convertible Preferred Stock. The rights of the Series A Convertible Preferred Stock are set forth in the Certificate of Designation. A total of 30,000 shares of Series A Convertible Preferred Stock are authorized for issuance under the Certificate of Designation. The shares of Series A Convertible Preferred Stock have a stated value of \$1,000 per share and, following stockholder approval of the conversion feature as described below, will be convertible into shares of our common stock at an initial conversion price of \$2.25 per share.

Holders of the Series A Convertible Preferred Stock are entitled to dividends on an as-if-converted basis in the same form as any dividends actually paid on shares of our common stock.

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In connection with the Private Placement, we agreed with the purchasers to prepare and file a definitive proxy statement with the SEC after the closing of the offering. We agreed that the proxy statement would include a proposal to permit the Series A Convertible Preferred Stock to become convertible into shares of our common stock as set forth in, and to the extent permitted by the, Certificate of Designation and to permit the issuance of the shares of common stock issuable upon such conversion, which issuance of shares, when aggregated with the shares of common stock issued in the Private Placement, could exceed 20% of our common stock outstanding before the Private Placement. In such proposal, we are asking our stockholders to approve that conversion feature of the Series A Convertible Preferred Stock, which will allow the holders of shares of Series A Convertible Preferred Stock to convert their shares of Series A Convertible Preferred Stock into common stock.

Our common stock is listed on The NASDAQ Global Market, and we are therefore subject to, among other rules, NASDAQ Listing Rule 5635(d) (the NASDAQ Rule). The NASDAQ Rule requires stockholder approval prior to the issuance of securities for less than the greater of book or market value of the stock in connection with a transaction, other than a public offering, involving the sale, issuance, or potential issuance by a company of common stock (or securities convertible into or exercisable for common stock) equal to 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance. The number of shares of common stock sold in the Private Placement constituted less than 19.99% of our outstanding shares of common stock immediately prior to the closing of that offering. Accordingly, the issuance of any additional shares of common stock (or securities convertible into or exercisable for common stock) in the offering in excess of the 19.99% limitation would require stockholder approval. The Series A Convertible Preferred Stock provides that it is convertible into shares of our common stock, but only if the conversion feature is approved by our stockholders in accordance with the NASDAQ Rule (subject to certain allowances for conversion in the event such conversion would not result in the aggregate number of shares of common stock issued upon conversion together with the shares of common stock sold in the Private Placement being great than 19.99% of the common stock outstanding immediately prior to the Private Placement).

We plan to file a definitive proxy statement with the SEC in October 2016 that includes a proposal to approve the conversion feature of the Series A Convertible Preferred Stock, which would allow the holders of shares of Series A Convertible Preferred Stock to convert their shares of Series A Convertible Preferred Stock into common stock. We anticipate that the stockholder meeting will be scheduled to take place in the fourth quarter of 2016. If our stockholders do not approve the conversion feature of the Series A Convertible Preferred Stock, the shares of Series A Convertible Preferred Stock will not become convertible and will remain outstanding in accordance with the terms of the Certificate of Designation until stockholder approval is obtained. In the event that we have not obtained such stockholder approval on or prior to March 29, 2017, commencing thereafter, to the extent that a purchaser is unable to convert any shares of Series A Convertible Preferred Stock because of the Exchange Cap (as defined in the Certificate of Designation) limitation included therein, a purchaser may require us to pay to such purchaser, within three Trading Days (as defined in the Securities Purchase Agreement) of written notice, cash by wire transfer of immediately available funds, in exchange for cancellation of the applicable portion of the Series A Convertible Preferred Stock subject to conversion, which cash amount for each share of common stock that we are unable to deliver pursuant to the Exchange Cap therein shall be equal to the highest trading price of our common stock in effect at any time during the period beginning on March 29, 2017 and ending on the date we make such payment.

If the proposal is approved by our stockholders, the shares of Series A Convertible Preferred Stock will be convertible, at the option of each holder, at any time or from time to time into shares of our common stock at the conversion price in effect at the time of conversion, except that, subject to certain limited exceptions, no holder of Series A Convertible Preferred Stock may convert the Series A Convertible Preferred Stock if, after giving effect to the conversion, the holder and all affiliated persons would own beneficially more than 4.99% of our common stock (subject to adjustment up to 9.99% solely at the holder's discretion upon 61 days' prior notice to us). The initial conversion price of \$2.25 is subject to appropriate adjustment in the event of a stock split, stock dividend, combination or other recapitalization affecting our common stock.

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Except as otherwise required by law, the holders of Series A Convertible Preferred Stock have no right to vote on matters submitted to a vote of our stockholders. Without the prior written consent of a majority of the outstanding shares of Series A Convertible Preferred Stock, however, we may not: (i) amend our sixth amended and restated certificate of incorporation (including the Certificate of Designation) in a manner adverse to the Series A Convertible Preferred Stock; (ii) create or authorize the creation of any other security convertible into or exercisable for any equity security ranking as to dividends, redemption or distribution of assets upon a liquidation senior to, the Series A Convertible Preferred Stock, or increase the authorized number of shares of Series A Convertible Preferred Stock; or (iii) enter into any agreement with respect to any of the foregoing.

In the event of the dissolution and winding up of our company, the proceeds available for distribution to our stockholders will be distributable *pari passu* among the holders of the shares of our common stock and Series A Convertible Preferred Stock, pro rata based upon the number of shares held by each such holder, as if the outstanding shares of our Series A Convertible Preferred Stock were convertible, and were converted, into shares of our common stock.

### **Common Stock Warrants**

As part of the Private Placement, certain of the selling stockholders received the Purchaser Warrants to purchase up to 13,333,334 shares of our common stock at an exercise price of \$2.25 per share. Additionally, HCW and its designees received the HCW Warrants to purchase up to 133,333 shares of our common stock at an exercise price of \$2.25 per share. The Common Stock Warrants include a cashless-exercise feature that may be exercised in the event there is no effective registration statement registering, or no current prospectus available for, the resale of the shares of common stock underlying the warrants as of the six-month anniversary of the closing of the Private Placement. The Common Stock Warrants will be exercisable following approval of the Private Placement by our stockholders and expire five years after the date of such stockholder approval.

In connection with the Private Placement, we agreed with the investors to prepare and file a definitive proxy statement with the SEC after the closing of the offering. We agreed that the proxy statement would include a proposal to permit the Common Stock Warrants to become exercisable for shares of our common stock as set forth in the warrant agreements governing the terms of the Common Stock Warrants, and to permit the issuance of the shares of common stock issuable upon such conversion, which issuance of shares, when aggregated with the shares of common stock issued in the Private Placement, could exceed 20% of our common stock outstanding before the Private Placement. In the proposal, we are asking our stockholders to approve that the exercise feature of the Common Stock Warrants, which will allow the holders of the Common Stock Warrants to exercise such warrants for common stock.

As described above, we are subject to the NASDAQ Rule. The Common Stock Warrants provide that they are exercisable for shares of our common stock, but only if the exercise feature is approved by our stockholders in accordance with the NASDAQ Rule. We plan to file a definitive proxy statement with the SEC in October 2016 that includes a proposal to approve the exercise feature of the Common Stock Warrants, which would allow the holders of the Common Stock Warrants to exercise such warrants for shares of common stock. We anticipate that the meeting will be scheduled to take place in the fourth quarter of 2016. If our stockholders do not approve the exercise feature of the Common Stock Warrants, the Common Stock Warrants will not be exercisable, and will remain outstanding in accordance with the terms of the warrant agreements governing the Common Stock Warrants.

If the proposal is approved by our stockholders, the Common Stock Warrants will be exercisable, at the option of each holder, at any time or from time to time for shares of our common stock at an exercise price of \$2.25, except that, subject to certain limited exceptions, no holder may exercise the Common Stock Warrants if, after giving effect to the exercise, the holder and all affiliated persons would own beneficially more than 4.99% of our common stock (subject to adjustment up to 9.99% solely at the holder's discretion upon 61 days' prior notice to us). The initial conversion price of \$2.25 is subject to appropriate adjustment in the event of a stock split, stock dividend, combination or other recapitalization affecting our common stock.

## **LEGAL MATTERS**

The validity of the shares of common stock offered hereby is being passed upon for us by Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, Boston, Massachusetts.

## **EXPERTS**

The audited financial statements of Histogenics Corporation incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

## **DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

The Delaware General Corporation Law and our sixth amended and restated certificate of incorporation and amended and restated bylaws provide for indemnification of our directors and officers for liabilities and expenses that they may incur in such capacities. In general, directors and officers are indemnified with respect to actions taken in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of our company, and with respect to any criminal action or proceeding, actions that the indemnitee had no reasonable cause to believe were unlawful.

We have also entered into identification agreements with our directors and executive officers. These identification agreements generally require us to pay, on behalf of each director and officer party thereto, all amounts that he or she is or becomes legally obligated to pay because of any claim or claims made against him or her because of any act or omission which he or she commits or suffers while acting in his or her capacity as our director and/or officer and because of his or her being a director and/or officer. Under the Delaware General Corporation Law, absent an identification agreement or a provision in a corporation's bylaws or certificate of incorporation, indemnification of a director or officer is discretionary rather than mandatory (except in the case of a proceeding in which a director or officer is successful on the merits).

We currently maintain a directors' and officers' liability insurance policy.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to such directors, officers or controlling persons pursuant to the foregoing provisions, or otherwise, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

## WHERE YOU CAN FIND MORE INFORMATION

We file reports and other information with the SEC as required by the Exchange Act. You can find, copy and inspect information we file at the SEC's public reference room, which is located at 100 F Street, N.E., Room 1580, Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the SEC's public reference room. You can review our electronically filed reports and other information that we file with the SEC on the SEC's web site at <http://www.sec.gov> or on our web site at <http://www.histogenics.com>.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and the securities, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's web site.

## INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and later information that we file with the SEC will automatically update and supersede some of this information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (other than Current Reports on Form 8-K containing only information furnished under Item 2.02 or Item 7.01 of Form 8-K, unless otherwise indicated therein), including filings made after the date of the initial registration statement, until we sell all of the securities covered by this prospectus or the sale of securities by us pursuant to this prospectus is terminated. The documents we incorporate by reference are:

- our Annual Report on Form 10-K for the year ended December 31, 2015;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016;
- our Proxy Statement on Schedule 14A filed with the SEC on April 28, 2016 (excluding those portions that are not incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2015);
- our Current Reports on Form 8-K filed with the SEC on February 2, 2016, March 10, 2016, May 4, 2016, May 10, 2016, May 12, 2016, June 22, 2016, August 11, 2016, September 16, 2016 and September 29, 2016, in each case only to the extent filed and not furnished; and
- the description of our common stock contained in our registration statement on Form 8-A (File No. 001-36751) filed under the Exchange Act on November 18, 2014, including any amendment or reports filed for the purpose of updating such descriptions.

Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into 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.

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We will provide each person to whom a prospectus is delivered a copy of all of the information that has been incorporated by reference in this prospectus but not delivered with the prospectus. You may obtain copies of these filings, at no cost, through the “Investor Relations” section of our website ([www.histogenics.com](http://www.histogenics.com)) and you may request a copy of these filings (other than an exhibit to any filing unless we have specifically incorporated that exhibit by reference into the filing), at no cost, by writing or telephoning us at the following address:

Corporate Secretary  
Histogenics Corporation  
830 Winter Street, 3rd Floor  
Waltham, Massachusetts 02451  
(781) 547-7900

Information on, or that can be accessed through, our website is not incorporated into this prospectus or other securities filings and is not a part of these filings.

**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the expenses to be incurred in connection with the offering described in this Registration Statement, all of which will be paid by the Registrant. All amounts are estimates except the SEC registration fee.

	<u>Amount</u>
Securities and Exchange Commission registration fee	\$ 9,692
Accountant's fees and expenses	\$ 10,000
Legal fees and expenses	\$100,000
Transfer agent's fees and expenses	\$ 5,000
Miscellaneous	\$ 25,308
Total expenses	\$150,000

**Item 15. Indemnification of Directors and Officers.**

The Registrant's amended and restated certificate of incorporation contains provisions that eliminate, to the maximum extent permitted by the General Corporation Law of the State of Delaware, the personal liability of the Registrant's directors for monetary damages for breach of their fiduciary duties as directors. The Registrant's amended and restated bylaws provide that the Registrant must indemnify its directors and officers and may indemnify its employees and other agents to the fullest extent permitted by the General Corporation Law of the State of Delaware.

Sections 145 and 102(b)(7) of the General Corporation Law of the State of Delaware provide that a corporation may indemnify any person made a party to an action by reason of the fact that he or she was a director, officer, employee or agent of the corporation or is or was serving at the request of a corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she 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 or her conduct was unlawful, except that, in the case of an action by or in right of the corporation, no indemnification may generally be made in respect of any claim as to which such person is adjudged to be liable to the corporation.

The Registrant has entered into indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in its amended and restated bylaws, and intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Registrant has purchased and intends to maintain insurance on behalf of any person who is or was a director or officer of the Registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The securities purchase agreement and registration rights agreement entered into with the selling stockholders, provides for by the Registrant of the selling stockholders, for certain liabilities, including liabilities arising under the Securities Act, and affords certain rights of contribution with respect thereto.

See also "Undertakings" set out in response to Item 17 herein.

**Item 16. Exhibits.**

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.



**Item 17. Undertakings.**

(a) The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - i. To include any prospectus required by section 10(a)(3) of the Securities Act;
  - ii. To reflect in the prospectus any facts or events arising after the effective date of the 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 the 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 the registration statement or any material change to such information in the registration statement.

Provided however, that paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
  - (i) each prospectus filed pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - (ii) 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 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

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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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this 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.

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

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Waltham, Commonwealth of Massachusetts, on this 5<sup>th</sup> day of October, 2016.

### HISTOGENICS CORPORATION

By: /s/ Adam Gridley  
Adam Gridley,  
President and Chief Executive Officer

### SIGNATURES AND POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Adam Gridley and Jonathan Lieber, and each of them, as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments) and any registration statement related thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Adam Gridley</u> <b>Adam Gridley</b>	Chief Executive Officer, President and Director (Principal Executive Officer)	October 5, 2016
<u>/s/ Jonathan Lieber</u> <b>Jonathan Lieber</b>	Chief Financial Officer (Principal Financial and Accounting Officer)	October 5, 2016
<u>/s/ Garheng Kong, M.D., Ph.D.</u> <b>Garheng Kong, M.D., Ph.D.</b>	Chairman of the Board	October 5, 2016
<u>/s/ Joshua Baltzell</u> <b>Joshua Baltzell</b>	Director	October 5, 2016
<u>/s/ David Gill</u> <b>David Gill</b>	Director	October 5, 2016
<u>/s/ John H. Johnson</u> <b>John H. Johnson</b>	Director	October 5, 2016
<u>/s/ Michael Lewis</u> <b>Michael Lewis</b>	Director	October 5, 2016
<u>/s/ Kevin Rakin</u> <b>Kevin Rakin</b>	Director	October 5, 2016

**EXHIBIT INDEX**

<b>Exhibit</b>	<b>Description</b>
3.1	Sixth Amended and Restated Certificate of Incorporation (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K as filed on December 8, 2014, and incorporated herein by reference)
3.2	Amended and Restated Bylaws (filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K as filed on December 8, 2014, and incorporated herein by reference)
3.3	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock of Histogenics Corporation (filed as Exhibit 3.3 to the Registrant's Current Report on Form 8-K as filed on September 16, 2016, and incorporated herein by reference)
4.1	Specimen stock certificate evidencing the shares of common stock (filed as Exhibit 4.1 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 as filed on November 26, 2014, and incorporated herein by reference)
4.2	Form of Warrant to Purchase Common Stock (filed as Exhibit 4.7 to the Registrant's Current Report on Form 8-K as filed on September 29, 2016, and incorporated herein by reference)
4.3	Warrant to Purchase Common Stock of Histogenics Corporation issued to H.C. Wainwright & Co., LLC dated September 29, 2016 (filed as Exhibit 4.8 to the Registrant's Current Report on Form 8-K as filed on September 29, 2016, and incorporated herein by reference)
5.1*	Opinion of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP
10.1	Securities Purchase Agreement dated September 15, 2016 (filed as Exhibit 10.34 to the Registrant's Current Report on Form 8-K as filed on September 16, 2016, and incorporated herein by reference)
10.2	Registration Rights Agreement dated September 29, 2016 (filed as Exhibit 10.35 to the Registrant's Current Report on Form 8-K as filed on September 29, 2016, and incorporated herein by reference)
10.3	Form of Support Agreement (filed as Exhibit 10.36 to the Registrant's Current Report on Form 8-K as filed on September 29, 2016, and incorporated herein by reference)
21.1	List of Subsidiaries (filed as Exhibit 21.1 to the Registrant's Annual Report on Form 10-K as filed on March 27, 2015, and incorporated herein by reference)
23.1*	Consent of Grant Thornton LLP, independent registered public accounting firm
23.2*	Consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (see page II-4 of this Registration Statement)

+ Indicates management contract or compensatory plan.

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment. The omitted portions of this exhibit have been filed with the SEC.

\* Filed herewith.

October 5, 2016

Histogenics Corporation  
830 Winter Street, 3rd Floor  
Waltham, MA 02451

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to Histogenics Corporation (the "Company") in connection with the filing with the Securities and Exchange Commission on October 5, 2016 of a registration statement on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"). The Registration Statement relates to the registration of up to an aggregate of 26,800,001 shares of common stock, par value \$0.01 (the "Common Stock") of the Company, consisting of (a) 2,596,059 shares of Common Stock (the "Shares"), and (b) 10,737,275 shares of Common Stock issuable upon conversion of 24,158.8693 shares of the Company's Series A Convertible Preferred Stock, stated value \$1,000 (the "Preferred Shares") and (c) 13,466,667 shares of Common Stock issuable upon the exercise of warrants to purchase 13,466,667 shares of Common Stock (the "Warrants" and, collectively with the Preferred Shares and Shares, the "Securities"). Each Warrant has an initial exercise price of \$2.25 per share of Common Stock and is exercisable for five (5) years following stockholder approval of the issuance of the Preferred Shares and Warrants.

This opinion letter is being delivered at your request in accordance with the requirements of Paragraph 29 of Schedule A to the Act and Item 601(b)(5)(i) of Regulation S-K under the Act.

The Shares and the Preferred Shares were sold pursuant to a securities purchase agreement (the "Securities Purchase Agreement") among the Company and the purchasers named therein dated September 15, 2016. Warrants exercisable for 13,333,334 shares of Common Stock were issued to such purchasers pursuant to the Securities Purchase Agreement and Warrants exercisable for 133,333 shares of Common Stock were issued to the placement agent and its designees as part of such placement agent's compensation pursuant to a letter agreement with the Company.

In connection with this opinion, we have examined the Registration Statement, the Company's Sixth Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the Certificate of Designation of Series A Convertible Preferred Stock filed as an exhibit to the Registration Statement (the "Certificate of Designation") and the Warrants, establishing the terms of the Securities in each case as in effect as of the date of this opinion letter, as certified by the Secretary of the Company, the corporate action of the Company relating to the Registration Statement and the authorization for issuance and sale of the Securities and the Common Stock underlying the Securities, as applicable, and matters in connection therewith and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion.

We have also examined and relied upon certificates of public officials and, as to certain matters of fact that are material to our opinions and on a certificate of an officer of the Company. We have not independently established any of the facts on which we have so relied.

For purposes of this opinion letter, we have assumed the accuracy and completeness of each document submitted to us, the genuineness of all signatures on original documents, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified, conformed or photostatic copies thereof, and the due execution and delivery of all documents where due execution and delivery are prerequisites to the effectiveness thereof. We have further assumed the legal capacity of natural persons, that persons identified to us as officers of the Company are actually serving in such capacity, that the representations of officers and employees of the Company are correct as to questions of fact, that the board of directors has taken all action necessary to set the issuance price of the Securities, and that each party to the documents we have examined or relied on (other than the Company) has the power, corporate or other, to enter into and perform all obligations thereunder and also have assumed the due authorization by all requisite action, corporate or other, the execution and delivery by such parties of such documents, and the validity and binding effect thereof of such parties. We also have assumed that the Company will not in the future issue or otherwise make unavailable so many shares of Common Stock that there are insufficient authorized and unissued shares of Common Stock remaining and available for issuance pursuant to the conversion of the Preferred Shares and the exercise of the Warrants for shares of Common Stock. We have not independently verified any of these assumptions.

The opinions expressed in this opinion letter are limited to the General Corporation Law of the State of Delaware and, solely in connection with the opinions in numbered paragraph 2 below, the laws of the State of New York and the laws of the Commonwealth of Massachusetts. We are not opining on, and we assume no responsibility for, the applicability to or effect on any of the matters covered herein of (a) any other laws; (b) the laws of any other jurisdiction; (c) the laws of any county, municipality or other political subdivision or local governmental agency or authority; or (d) the unenforceability under certain circumstances under law or court decisions of provision providing for the indemnification of, or contribution to, a party with respect to a liability where such indemnification or contribution is contrary to public policy. The opinions set forth below are rendered as of the date of this opinion letter. We assume no obligation to update or supplement any of such opinions to reflect any changes of law or fact that may occur. We express no opinion concerning the enforceability of any waiver of rights or defenses with respect to stay, extension or usury laws. Our opinions expressed herein are also subject to the qualification that no term or provision shall be included in any Warrant or any other agreement or instrument pursuant to which any of the Securities are to be issued that would affect the validity of such opinions.

Based upon and subject to the foregoing and subject to the additional qualifications set forth below, we are of the opinion that when (a) the Registration Statement becomes effective under the Act and (b) the Certificate of Designation has been filed with the Delaware Secretary of State as required by applicable law:

1. The shares of Common Stock comprising the Shares are duly authorized for issuance by the Company and the Shares are validly issued, fully paid and non-assessable;
2. The Warrants constitute valid and binding obligations of the Company (subject to the effect of bankruptcy, insolvency, fraudulent transfer, reorganization, receivership, moratorium and other laws affecting the rights and remedies of creditors or secured parties generally, and to the exercise of judicial discretion in accordance with general principles of equity, whether applied by a court of law or equity);
3. The Common Stock issuable upon conversion of the Preferred Shares, when such Preferred Shares are converted in accordance with the terms of the Certificate of Designation, will be validly issued, fully paid and non-assessable; and

4. The Common Stock issuable upon exercise of the Warrants, when issued, paid for (which amount shall be not less than the par value of the Common Stock, as applicable) and delivered upon exercise of the Warrants in accordance with the terms of the Warrants, will be validly issued, fully paid and non-assessable.

We consent to the use of this opinion as Exhibit 5.1 to the Registration Statement, and further consent to the use of our name under the caption "Legal Matters" in the prospectus included in the Registration Statement, and in any amendment or supplement thereto.

Very truly yours,

/s/ Gunderson Dettmer Stough  
Villeneuve Franklin & Hachigian, LLP

GUNDERSON DETTMER STOUGH  
VILLENEUVE FRANKLIN & HACHIGIAN, LLP

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We have issued our report dated March 27, 2016 with respect to the consolidated financial statements of Histogenics Corporation included in the Annual Report on Form 10-K for the year ended December 31, 2015, which is incorporated by reference in this Registration Statement. We consent to the incorporation by reference of the aforementioned report in this Registration Statement, and to the use of our name as it appears under the caption "Experts."

/s/ GRANT THORNTON LLP

Boston, Massachusetts  
October 5, 2016