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October 28, 2014

CONFIDENTIAL TREATMENT REQUESTED BY HISTOGENICS CORPORATION PORTIONS OF THIS DOCUMENT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT AND, WHERE APPLICABLE, HAVE BEEN MARKED WITH AN ASTERISK TO DENOTE WHERE OMISSIONS HAVE BEEN MADE. THE CONFIDENTIAL MATERIAL HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

Via EDGAR and Courier

U.S. Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549 Attention: Amanda Ravitz Jay Mumford

Daniel Morris

Re: Histogenics Corporation

Registration Statement on Form S-1 (File No. 333-199202)

Filed October 7, 2014

Dear Ms. Ravitz:

On behalf of Histogenics Corporation (the "Company"), and in connection with the submission of letters dated April 11, 2014 (the "Original Response Letter"), October 23, 2014 (the "Initial Supplemental Response Letter") and October 24, 2014 (the "Second Supplemental Response Letter") in response to comments from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") contained in your letter dated March 13, 2014 (the "Comment Letter"), relating to the above-referenced Registration Statement on Form S-1 originally confidentially submitted by the Company with the Commission on February 14, 2014 (the "Registration Statement"), we submit this supplemental letter to further address comment 8 of the Comment Letter and fully amend and restate the Second Supplemental Response Letter as set forth herein.

Because of the commercially sensitive nature of information contained herein, this submission is accompanied by a request for confidential treatment for selected portions of this letter. The Company has filed a separate letter with the Office of Freedom of Information and Privacy Act Operations in connection with the confidential treatment request, pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83. For the Staff's reference, we have enclosed a copy of the Company's letter to the Office of Freedom of Information and Privacy Act Operations, as well as a copy of this correspondence, marked to show the portions redacted from the version filed via EDGAR and for which the Company is requesting confidential treatment. For the convenience of the Staff, we are providing to the Staff by courier delivery copies of this letter.

In this letter, we have recited comment 8 of the Comment Letter in italicized, bold type and have followed the comment with the Company's response. Except as otherwise specifically indicated, page references herein correspond to the page of the Registration Statement, as applicable.

Stock-Based Compensation, pages 60-66 of February 14, 2014 Confidentially Submitted S-1

8. Please tell us the estimated initial public offering price. To the extent that there is a significant difference between the estimated grant-date fair value of your common stock during the past twelve months and the estimated IPO price, please discuss for us each significant factor contributing to the difference.

To assist the Staff in its evaluation of the Company's stock compensation, the Company has provided the analysis as set forth in this letter. Please note that the foregoing per share amounts, and other per share amounts set forth in this letter, reflect the impact of an anticipated reverse stock split of outstanding capital stock on a * * * -to-1 basis, which the Company plans to effect prior to the closing of the Company's initial public offering ("**IPO**").

The Company will set forth a bona fide offering price range in a pre-effective amendment to the Registration Statement prior to the distribution of any preliminary prospectus.

GRANTS OF COMMON STOCK OPTIONS IN THE PRECEDING 12 MONTHS

The following table summarizes by grant date the number of shares of common stock underlying stock options granted during the previous twelve months, as well as the associated per share exercise price and the estimated fair value per share of the Company's common stock on the grant date:

Grant Date	Number of Common Shares Underlying Options Granted	Exercise Price Per Common Share	Estimated Fair Value Per Common Share
December 11, 2013	***	¢ ***	¢ ***
· · · · · · · · · · · · · · · · · · ·	* * *	Ψ	\$ ***
April 30, 2014		ψ	Φ
July 17, 2014	* * *	\$ ***	\$ ***

DETERMINATION OF FAIR VALUE OF COMMON STOCK

The Company respectfully directs the Staff to pages 65 through 66 of the Registration Statement for a thorough discussion of the Company's methodology for determining the fair value of its common stock. As described in the Registration Statement, the Company has historically determined the fair value of its common stock using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation (the "**Practice Guide**"). In addition, the Company's Board of Directors also considered numerous objective and subjective factors, along with input from management, to determine the fair value of the Company's common stock as disclosed in the Registration Statement.

In connection with determining the fair value of the Company's common stock of \$* * * per share as of June 30, 2014, as described on page 69 of the Registration Statement (the "June Valuation Price"), the Company utilized the Probability Weighted Expected Return Method ("PWERM"). The PWERM is a scenario-based analysis that estimates the per share value of common stock based on the probability-weighted

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present value of expected future equity values for the common stock, under various possible future liquidity event scenarios, in light of the rights and preferences of each class of stock, discounted for time to liquidity event at a rate that considers lack of marketability. The Company believes that the probability weighting of each potential liquidity event used in its PWERM analysis was an appropriate methodology in light of the Company's stage of development, the status of its research and development efforts and financial position, external market conditions affecting the life sciences industries, the volatility in the capital markets, especially with respect to initial public offerings, and the relative likelihood of achieving a liquidity event such as an initial public offering or sale of the Company in light of prevailing market conditions.

VALUATIONS AND OPTION GRANTS OVER THE PREVIOUS 12 MONTHS

The Company respectfully directs the Staff to pages 66 through 69 of the Registration Statement for a thorough discussion of the Company's valuation and option grants over the previous 12 months. The Company considered 7 liquidation events consisting of (i) two near term initial public offering scenarios, (ii) one longer term valuation initial public offering scenario, (iii) three different acquisition or merger scenarios with low, medium and high valuations, and (iv) a dissolution scenario. For the purpose of determining the June Valuation Price, the two near term initial public offering scenarios were given probability weights of 35% and 40%, the longer term initial public offering scenario was given a probability weight of 5%, each of the three acquisition or merger scenarios were given a probability weight of 5% and the dissolution scenario was given a probability weight of 5%.

DISCUSSION OF ESTIMATED OFFERING PRICE

The Company advises the Staff that in October 2014, the Company's lead underwriters advised the Company that, based on the then-current market conditions, they would recommend to the Company a preliminary price range of \$* * * to \$* * * per share (the "**Preliminary Price Range**"), with a midpoint of \$* * * per share (the "**Midpoint Price**"), for the Company's IPO. As mentioned above, the foregoing per share amounts, and other per share amounts set forth in this letter, reflect the impact of an anticipated reverse stock split of the Company's outstanding common stock, which the Company plans to effect prior to the closing of the IPO.

As is typical in IPOs, the estimated price range for the offering was derived by quantitative and qualitative analysis that differed from the methodology previously used by the Company. Among the factors that were considered in setting the estimated price range prepared by the Company's lead underwriters for the offering were the following:

- an analysis of the typical valuation ranges seen in recent IPOs for comparable companies in the Company's industry;
- the general condition of the securities markets and the recent market prices of publicly traded common stock of comparable companies;
- · an assumption that there would be a receptive public trading market for clinical stage biotechnology companies such as the Company; and
- an assumption that there would be sufficient demand for the Company's common stock to support an offering of the size contemplated by the Company.

The Midpoint Price range of \$* * * per share exceeds the fair value of the June Valuation Price by \$* * * per share. The Company respectfully submits that the difference between the June Valuation Price and the Midpoint Price is primarily attributable to the fact that the methodology applied for determining the June Valuation Price incorporated multiple probability-weighted liquidity scenarios, not all of which allocate value to the Company's common stock, and inherently decreases the estimated fair value per

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share due to the combination of (i) the mix of other expected business equity values discounted for their future value and (ii) the application of a discount to liquidity event which accounts for lack of marketability. In contrast, the Midpoint Price assumes with 100% probability that the Company completes an IPO and the Company's preferred stock will be converted into common stock in the IPO. For purposes of context, in determining the June Valuation Price, a probability weighting of 35% and 40% was assigned to two near term IPO scenarios as noted above. In these scenarios, the fair value of the Company's common stock, prior to the application of a discount due to lack of marketability would have been a weighted average of \$* * * per share. The Midpoint Price assumes only a single potential liquidity event, the IPO, and does not include a discount for lack of marketability, as an active trading market for the common stock is expected to exist following the IPO. As a result, the Midpoint Price was not impacted by other expected business equity values from other potential future liquidity events nor discounted for lack of marketability.

The Company assessed the various IPO scenarios at the time of determining the June Valuation Price in consideration of the IPO market conditions relative to the Company's stage of development and the perceived likelihood of being able to complete an IPO. In making its assessment, the Company's board of directors (the "**Board**") considered the following factors specific to the Company:

- The Company is an early-stage biotechnology company. As of the determination of the June Valuation Price, the Company's lead product candidate was in phase 3 clinical testing. Generally, companies with product candidates in only phase 3 clinical development have had a more difficult time completing IPOs.
- As of the June Valuation, the Board had obtained investor feedback through management's "testing the waters" meetings, which informed the Company as to the level of institutional investor interest in the Company and was not at the level anticipated by management and the Board.
- The Company's chief executive officer first joined the Company in May 2014 and although he had extensive and relevant public company experience, he had no experience with the Company's operations, pipeline, culture and prospects and had no experience raising capital for the Company.
- As of the end of June 2014, the Company had cash, cash equivalents and marketable securities of \$7.8 million. At its current burn rate of \$* * * to \$* * * million per quarter, the Company's cash resources at such time was forecasted to only last into the fourth quarter of 2014. In June 2014, the Board believed the Company's tight liquidity position would make it more challenging to complete an IPO in the near term.
- If the Company is unable to complete an IPO in the near term, the Company will need to seek an alternative financing source to continue to fund operations or will need to significantly curtail operations.

In addition to factors specific to the Company, the Board also considered the following important marketplace factors:

- The IPO market for early-stage biotechnology companies had deteriorated significantly in the months leading up to the June Valuation Price determination, particularly with respect to downward pricing pressure and weakening institutional participation:
 - The average IPO price for the months of March, April and May of 2014 were approximately 3%, 23% and 35%, respectively, below the mid-point of the published price ranges. The sharp decline in both April and May signaled a significant change and weakness in the market, which impacted the Board's determination of value.

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- The market weakness seen in IPO pricing in April and May was accompanied by a similar trend in insider participation. The greater the level of insider participation, the weaker the demand is from institutional investors. For completed IPOs, the average level of insider participation in March, April and May was 8%, 32% and 40%, respectively. The sharp increase in both April and May was consistent with a general deterioration of the IPO market for early-stage biotech companies.
- There was a significant amount of biotechnology IPO activity in the first half of 2014, with the rate of IPOs slowing significantly from the first quarter of 2014 to the second quarter of 2014, leading to a concern that by the time the Company was ready to go public in the late third quarter or fourth quarter of 2014, the market may reach a saturation point for biotechnology IPOs and the IPO window in the latter part of the year would close:
 - · There were 26 Life Science IPOs priced in the first quarter, 16 in the second quarter and 19 in the third quarter of 2014
 - Of the 26 IPO's that went out in the first quarter of 2014, 73% priced within or above the range provided by underwriters; however
 in the second quarter of 2014, only 31% of the 16 IPO's priced within or above the range provided by underwriters, highlighting a
 more sober economic environment at June 30, 2014
 - In the first quarter of, 2014 insiders on average contributed 15% towards average IPO proceeds; in the second quarter of, 2014 insider contributions increased to 19% of IPO proceeds demonstrating a greater need for support to get a deal done
 - Given the large number of IPOs to date in 2014, the Board was aware that there would be significant competition for additional IPOs that would close in the balance of 2014. The Board also knew that there were approximately 19 more IPOs in the queue as of June 30, 2014, not including those that had filed confidentially or were preparing to file.

As a result of the above factors, as of June 30, 2014, there was significant uncertainty as to the Company's ability to successfully complete a near-term IPO, especially at a higher valuation.

The various IPO scenarios in the Board's June Valuation model were weighted a combined 80% versus a 15% combined weighting to a strategic sale or asset sale. In the case where the Company's IPO is delayed beyond the near-term, as mentioned above, the Company will need to raise additional private capital with a potential return to the public markets in 2016.

As a result of applying the Board's valuation methodology, the valuation of common stock in a near-term IPO at a higher or lower valuation was estimated to range from \$* * * to \$* * * per share, which is not inconsistent with the preliminary per share estimated IPO price range confidentially disclosed in the Company's prior correspondence with the Staff. When factoring the other five various liquidity scenarios, the Board estimated two of its scenarios, roughly 10%, that combined contributed no value to the common stockholders, and had three scenarios, roughly 15%, at which liquidity events would happen three years from the date of the valuation.

The June 30, 2014 valuation utilized a discount for lack of marketability ("**DLOM**") since holders of a minority interest in the equity of a privately held company have no ready market for their interest other than by a private sale to another partner or a willing buyer. The application of the DLOM in all weight-adjusted scenarios accounted for approximately \$* * * per share of the approximate \$* * * per share

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difference between the June Valuation Price and the Midpoint Price. The Company respectfully submits that the Preliminary Price Range represents a future price for shares of the Company's common stock that, if issued in the IPO, will be immediately freely tradable in a public market, whereas the June Valuation Price represents a contemporaneous estimate of the fair value of shares that were then illiquid, might never become liquid and, even if an IPO were successfully completed, would remain illiquid at least until the expiration of the 180-day lockup period following the IPO. This illiquidity also accounts for a substantial portion of the difference between the June Valuation Price and the Midpoint Price.

The June 30, 2014 valuation also utilized other probability weighted liquidity scenarios in which liquidation preferences of the Company's preferred stockholders received all proceeds and thus there was no value assumed for common stock. These scenarios, which included a Company low valuation sale scenario weighted at 5% and a dissolution scenario weighted at 5%, both resulted in a fair value determination of \$0.00 per share.

The various liquidity events in the Board's June 30, 2014 valuation, as previously discussed, were considered likely to occur within six to eighteen months and, as a result, the per share common prices for the liquidity scenarios were discounted to a present value. The present value discount reflects the cost of capital of an established small biotechnology company based on industry data regarding such factors for similarly situated companies. The June 30, 2014 valuation utilized a present value discount factor based on a 20.9% weighted average cost of capital. The application of the discount factor in all weight adjusted scenarios accounted for approximately \$* * * per share of the approximate \$* * * per share difference between the June Valuation Price and the Midpoint Price. Due to the Company's tight liquidity position at June 30, 2014 and with no assurance that the Company would be able to access the public markets, management considered the need for additional financing alternatives, including a bridge financing. [The Company's longer-term liquidity events assumed that the Company would raise capital through a bridge loan in late 2014, which would provide an additional year of financing. Subsequent to the bridge financing, the Company's plans were to further the development of its internal research and development programs to a stage where it would be possible to successfully access the public capital markets.] The Company made the assumption that it would take an additional year to get the research and development programs to the stage of development where a second IPO attempt would be possible and, as result, the liquidity events in the Board's June 24, 2014 valuation took into account events which range from six to eighteen months from that date.

The Company believes that the difference in fair value between the midpoint of the preliminary price range and the estimated per share common stock fair value on June 30, 2014 is primarily the result of the change in the probability of a near term IPO to virtually 100% which is implicit in the preliminary price range. The primary factors that allowed the Company to progress towards an IPO from June 30, 2014, when the Board only attributed 75% probability of being able to achieve a near-term IPO, to being in a position to determine the preliminary price range in late October 2014, were:

- The market reception to biotechnology IPOs and the overall industry improved during the third quarter of 2014.
 - Of the discounted IPOs that went effective in the second quarter of 2014, discussed above, those same companies 63% on average traded above their offering price, reflecting improved market conditions.
- Subsequent to June 30, 2014, in addition to the general capital market improvements discussed above, the Company completed several critical events necessary to proceed toward an IPO:
 - the Company built-out and continued its progress with moving its manufacturing activities in-house;

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- the Company increased the number of patients enrolled in its Phase 3 clinical trial;
- the public filing of the registration statement in October 2014;
- · management, including the Company's chief executive officer, worked together for four months; and
- holding further "test-the-waters" meetings with more than 43 potential IPO investors in July and August 2014 that led the Board to believe that the investment community found its business model and profile attractive.

In addition, the estimated IPO price range necessarily assumes that the IPO has occurred, that a public market for the Company's common stock has been created and that the Company's preferred stock has been converted into common stock in connection with the IPO, and excludes any discount for lack of marketability of the Company's common stock, any discount to reflect the time value of money for the period from the assumed IPO back to the valuation date, any preferences of the Company's preferred stock and any assumption of less than a 100% probability of an IPO, all of which were factored into the Board's June 30, 2014 valuation.

The Company believes that the remaining difference between the June Valuation Price and the Midpoint Price is attributed to the fact that the June 30, 2014 valuation utilized a quantitative methodology to determine the fair value of the Company's common stock, which may differ from the more qualitative and subjective methodology used by some public market investors to determine the price that they are willing to pay in the IPO. In addition, following the June 30, 2014 valuation, the Company entered into an exclusive channel collaboration agreement with Intrexon Corporation which was not contemplated when the June 30, 2014 valuation was conducted. The Board believes this event to be significant from an investor perspective as this agreement substantially strengthens the Company's product candidate development pipeline. Also, other factors may have an impact, such as the inherent uncertainty of completing an IPO and the possibility that the actual offering price could be substantially lower than the estimated offering price range provided by the Company's lead underwriters.

*** Confidential material redacted

Please contact me or, in my absence, Albert Vanderlaan, at (617) 648-9298, if you have any questions about this confidential submission.

Sincerely yours,

/s/ Marc Dupré

Marc Dupré

Gunderson Dettmer Stough Villeneuve Franklin & Hachigian,

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m LP}$

cc: Adam Gridley

Histogenics Corporation

Keith Scherer Albert Vanderlaan

Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP

*** Confidential material redacted