

PROGENICS PHARMACEUTICALS INC
Form S-3
October 12, 2018

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As filed with the Securities and Exchange Commission on October 12, 2018

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

PROGENICS PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

	One World Trade Center	
Delaware	New York, New York 10007	13-3379479
	(646) 975-2500	
<i>(State or other jurisdiction</i>	<i>(Address, including zip code, and telephone number,</i>	<i>(I. R. S. Employer</i>
<i>of incorporation or organization)</i>	<i>including area code, of registrant's principal executive</i>	<i>Identification No.)</i>
	<i>offices)</i>	

Mark R. Baker

Chief Executive Officer

Progenics Pharmaceuticals, Inc.

One World Trade Center

New York, New York 10007

(646) 975-2500

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

Copies to:

**Tobias L. Knapp, Esq.
O'Melveny & Myers LLP
Times Square Tower
Seven Times Square
New York, New York 10036
(212) 408-2440**

Approximate date of commencement of proposed sale to the public: From time to time on or after the effective date of this Registration Statement.

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

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

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

If this Form is a 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, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act:

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

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

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Title of each class of securities to be registered (1)	Amount to be registered	Proposed maximum aggregate offering price per security (3)	Proposed maximum aggregate offering price (3)	Amount of registration fee
Common Stock, par value \$0.0013 per share	—	—	—	—
Preferred Stock, par value \$0.001 per share	—	—	—	—
Debt Securities	—	—	—	—
Warrants	—	—	—	—
Rights	—	—	—	—
Units	—	—	—	—
Total	\$250,000,000(2)	—	\$250,000,000(2)	\$13,423(2)

(1) Including such indeterminate amounts, numbers and principal amounts of securities as shall have an aggregate initial offering price not to exceed \$250,000,000. If any debt securities are issued at an original issue discount, the offering price of such debt securities shall be in such greater principal amount as shall result in an aggregate initial offering price not to exceed \$250,000,000, less the aggregate dollar amount of all securities previously issued hereunder. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. Including also such indeterminate amounts and numbers of securities as may be issued in primary offerings or upon exercise, conversion or exchange of any securities registered hereunder that provide for exercise, conversion or exchange, including pursuant to anti-dilution provisions of any such securities.

(2) The \$250,000,000 of securities registered pursuant to this registration statement includes \$139,248,833 of securities, or the Unsold Securities, registered pursuant to the registration statement on Form S-3 (Registration No. 333-215454), which was declared effective on January 19, 2017. Pursuant to Rule 415(a)(6) under the Securities Act of 1933, as amended, or the Securities Act, the filing fees in the amount of \$16,139 previously paid in connection with the Unsold Securities will continue to be applied to the Unsold Securities. Accordingly, a filing fee of \$13,423 calculated in accordance with Rule 457(o), is paid herewith in connection with \$110,751,167 of securities registered hereunder.

(3) Not specified as to each class of securities to be registered pursuant to General Instruction II.D to Form S-3 under the Securities Act.

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

registration statement shall become effective on such date as the Commission acting pursuant to said Section 8(a), may determine.

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EXPLANATORY NOTE

This registration statement contains two prospectuses:

a base prospectus which covers both the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$250,000,000 of the registrant's common stock, preferred stock, debt securities, warrants, rights and/or units; and

a sales agreement prospectus covering the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$75,000,000 of the registrant's common stock that may be issued and sold under a sales agreement with Cantor Fitzgerald & Co.

The base prospectus immediately follows this explanatory note. The sales agreement prospectus immediately follows the base prospectus. The common stock that may be offered, issued and sold by the registrant under the sales agreement prospectus is included in the \$250,000,000 of securities that may be offered, issued and sold by the registrant under the base prospectus.

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

SUBJECT TO COMPLETION, DATED OCTOBER 12, 2018

PROSPECTUS

\$250,000,000

**Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Units**

From time to time, we may sell common stock, par value \$0.0013 per share, preferred stock, par value \$0.001 per share, debt securities, warrants, rights and/or units in one or more offerings. This prospectus describes the general manner in which such securities may be offered using this prospectus. We will specify in an accompanying prospectus supplement the terms of securities offered and the offering thereof. Our common stock, currently the only security outstanding, is listed on The Nasdaq Global Select Market under the symbol “PGNX.”

Investing in our securities involves a high degree of risk. See “Risk Factors” on page 6 of this prospectus and in the documents incorporated by reference in this prospectus before investing in our securities.

The securities covered by this prospectus may be sold directly by us to investors, through agents designated from time to time or through underwriters or dealers at prices and on terms to be determined at the time of offering. We will include in the accompanying prospectus supplement the names of any underwriters or agents and any applicable commissions or discounts. Additional information on the methods of sale appears under “Plan of Distribution.” We will also describe in the prospectus supplement the way(s) in which we expect to use the net proceeds we receive from any

sale.

Neither the U.S. Securities and Exchange Commission (the “SEC”) nor any state securities commission has approved or disapproved of these securities or determined if this prospectus or the accompanying prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2018.

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You should rely only on the information contained or incorporated by reference in this prospectus and in any applicable supplement to this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, the accompanying prospectus supplement and any free writing prospectus prepared by or on behalf of us is accurate only as of the date on their respective covers. Additionally, any information we have incorporated by reference in this prospectus or in any applicable prospectus supplement is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

This prospectus and any applicable prospectus supplement contain and incorporate by reference market data, industry statistics and other data that have been obtained or compiled from information made available by third parties. We have not independently verified such data. This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus are the property of their respective owners.

When used in this prospectus, the terms “Progenics”, “we”, “our”, “us” and similar terms refer to Progenics Pharmaceuticals, Inc., a Delaware corporation, and its subsidiaries, unless otherwise specified.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the SEC using a shelf registration process. By using a shelf registration statement, we may, from time to time, offer and sell securities described in this prospectus in one or more offerings with an aggregate total offering price of not more than \$250,000,000. This prospectus describes the general manner in which we may offer securities by this prospectus. Each time we sell securities pursuant to the registration statement we will provide a prospectus supplement (which term includes, as applicable, the at-the-market sales agreement prospectus filed with the registration statement of which this prospectus forms a part) that will contain specific information about the offering and the securities offered and may also add, update or change information contained in this prospectus. If there is any inconsistency between information in this prospectus and the accompanying prospectus supplement, you should rely on the information in the latest supplement and documents incorporated by reference herein. This prospectus may not be used to offer to sell, solicit an offer to buy or consummate a sale of securities unless it is accompanied by a prospectus supplement.

This prospectus, together with the accompanying prospectus supplement, contains important information you should know before investing, including important information about us and the securities being offered. You should carefully read both documents, as well as the additional information contained in the documents described under “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in both this prospectus and the accompanying prospectus supplement, and in particular the periodic and current reports we file with the SEC.

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WHERE YOU CAN FIND MORE INFORMATION

This prospectus and the accompanying prospectus supplement do not contain all of the information set forth in the registration statement and its exhibits and schedules in accordance with SEC rules and regulations. For further information with respect to us and the securities being offered hereby, you should read the registration statement, including its exhibits and schedules. Statements contained in this prospectus and the accompanying prospectus supplement, including documents that we have incorporated by reference, as to the contents of any contract or other document referred to are not necessarily complete, and, with respect to any contract or other document filed as an exhibit to the registration statement or any other such document, each such statement is qualified in all respects by reference to the corresponding exhibit. You should review the complete document to evaluate these statements. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database or our website, or at the offices of the SEC, where they may be examined without charge at the Public Reference Room, at the address listed below, or obtained upon payment of the prescribed fees.

We file annual, quarterly and current reports, proxy statements and other documents with the SEC under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"). The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including Progenics, that file electronically with the SEC. You may obtain documents that we file with the SEC at www.sec.gov and read and copy them at the SEC's Public Reference Room at 100 F Street NE, Washington, DC 20549 (information on operation of the Public Reference Room is available by calling the SEC at 1-800-SEC-0330).

We also make these documents available on our website at www.progenics.com. Our website and the information contained or connected to our website is not incorporated by reference in this prospectus or any prospectus supplement, and you should not consider it part of this prospectus or any prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules permit us to incorporate by reference information in this prospectus and the accompanying prospectus supplement. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and the accompanying prospectus supplement, except for information superseded by information contained in this prospectus and/or the accompanying prospectus supplement itself or in any subsequently filed incorporated document. This prospectus and the accompanying prospectus supplement incorporate by reference the documents set forth below that we have previously filed with the SEC (Commission File No. 0-23143), other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about Progenics and its business and financial condition:

our Annual Report on Form 10-K for the year ended December 31, 2017 (“Annual Report”);

the information specifically incorporated by reference into our Annual Report from our Definitive Proxy Statement on Schedule 14A for our 2018 Annual Meeting of Shareholders;

our Quarterly Reports on Form 10-Q for the periods ended March 31 and June 30, 2018;

our Current Reports on Form 8-K filed on March 22, 2018, May 11, 2018, May 31, 2018, June 14, 2018, July 3, 2018, August 7, 2018 (with respect to Item 8.01 only) and August 10, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A, dated September 29, 1997, including any amendments or reports filed for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) after the date of the initial registration statement and prior to the effectiveness of the registration statement and subsequent to the date of this prospectus and prior to the termination of the offering covered by this prospectus shall be deemed to be incorporated by reference in this prospectus and the accompanying prospectus supplement and to be a part hereof from the date of filing of such documents.

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Any statement contained herein or in a document incorporated or deemed to be incorporated by reference in this prospectus or the accompanying prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus and such supplement to the extent that a statement contained in this prospectus or such supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus and such supplement, modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or such supplement.

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus and the accompanying prospectus supplement. Prospective investors may obtain documents incorporated by reference in this prospectus and the accompanying prospectus supplement by requesting them in writing or by telephone from us at our executive offices at:

Progenics Pharmaceuticals, Inc.

One World Trade Center

New York, New York 10007

(646) 975-2500

Attention: Investor Relations and Corporate Communications

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related free writing prospectus constitute “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Statements contained in this communication that refer to our estimated or anticipated future results or other non-historical facts are forward-looking statements that reflect our current perception of existing trends and information as of the date of this communication. Forward looking statements generally will be accompanied by words such as “anticipate”, “believe”, “plan”, “could”, “should”, “estimate”, “exp”, “forecast”, “outlook”, “guidance”, “intend”, “may”, “might”, “will”, “possible”, “potential,” “predict”, “project”, or other similar phrases or expressions. Such statements are predictions only, and are subject to risks and uncertainties that could cause actual events or results to differ materially.

Forward-looking statements involve known and unknown risks and uncertainties which may cause our actual results, performance or achievements to be materially different from those expressed or implied by forward-looking statements. While it is impossible to identify or predict all such matters, these differences between forward-looking statements and our actual results, performance or achievement may result from, among other things, the inherent uncertainty of the timing and success of, and expense associated with, research, development, regulatory approval and commercialization of our products and product candidates, including the risks that clinical trials will not commence or proceed as planned; products which appear to be promising in early trials will not demonstrate efficacy or safety in larger-scale trials; clinical trial data on our products and product candidates will be unfavorable; our products will not receive marketing approval from regulators or, if approved, do not gain sufficient market acceptance to justify development and commercialization costs; the sales of RELISTOR, AZEDRA and other products by us and our partners, and the revenue and income generated for us thereby, may not meet expectations; competing products currently on the market or in development might reduce the commercial potential of our products; we, our collaborators or others might identify side effects after the product is on the market; or efficacy or safety concerns regarding marketed products, whether or not originating from subsequent testing or other activities by us, governmental regulators, other entities or organizations or otherwise, and whether or not scientifically justified, may lead to product recalls, withdrawals of marketing approval, reformulation of the product, additional pre-clinical testing or clinical trials, changes in labeling of the product, the need for additional marketing applications, declining sales or other adverse events.

We are also subject to risks and uncertainties associated with the actions of our corporate, academic and other collaborators and government regulatory agencies, including risks from market forces and trends; potential product liability; intellectual property, litigation and other dispute resolution, environmental and other risks; the risk that we may not be able to obtain sufficient capital, recruit and retain employees, enter into favorable collaborations or transactions, or other relationships or that existing or future relationships or transactions may not proceed as planned; the risk that current and pending patent protection for our products may be invalid, unenforceable or challenged, or fail to provide adequate market exclusivity, or that our rights to in-licensed intellectual property may be terminated for our failure to satisfy performance milestones; the risk of difficulties in, and regulatory compliance relating to, manufacturing products; and the uncertainty of our future profitability.

Risks and uncertainties to which we are subject also include general economic conditions, including interest and currency exchange-rate fluctuations and the availability of capital; changes in generally accepted accounting principles; the impact of legislation and regulatory compliance; the highly regulated nature of our business, including government cost-containment initiatives and restrictions on third-party payments for our products; trade buying patterns; the competitive climate of our industry; and other factors set forth in this document and other reports filed with the SEC. In particular, we cannot assure you that AZEDRA or RELISTOR will be commercially successful or be approved in the future in other formulations, indications or jurisdictions, or that any of our other programs will result in a commercial product.

Although we believe that our expectations are based on reasonable assumptions within the bounds of our current knowledge of our industry, business and operations, we cannot guarantee that actual results will not differ materially from our expectations. In evaluating such forward-looking statements, you should specifically consider various factors, including the risks outlined under the heading “Risk Factors” contained in this prospectus or any accompanying prospectus supplement, and in our Annual Report on Form 10-K for the year ended December 31, 2017 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018. The discussion of risks and uncertainties set forth in those filings is not necessarily a complete or exhaustive list of all risks facing us at any particular point in time. We operate in a highly competitive, highly regulated and rapidly changing environment, and our business is in a state of evolution. Therefore, it is likely that over time new risks will emerge and the nature and elements of existing risks will change. It is not possible for management to predict all such risk factors or changes therein or to assess either the impact of all such risk factors on our business or the extent to which any individual risk factor, combination of factors or new or altered factors may cause results to differ materially from those contained in any forward-looking statement. Forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should carefully read this prospectus and any accompanying prospectus supplement, together with the information incorporated herein or therein by reference, and with the understanding that our actual future results may materially differ from what we expect.

Except as required by law, forward-looking statements speak only as of the date they are made. We do not have a policy of updating or revising forward-looking statements and, except as expressly required by law, we disclaim any intent or obligation to update or revise any statements as a result of new information or future events or developments. It should not be assumed that our silence over time means that actual events are bearing out as expressed or implied in forward-looking statements.

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THE COMPANY

This summary contains a general summary of the information contained in this prospectus. It may not include all the information that is important to you. You should read the entire prospectus, any prospectus supplement delivered with this prospectus and the documents incorporated by reference before making an investment decision.

Overview

We develop innovative medicines and other technologies to target, diagnose and treat cancer, including: (1) therapeutic agents designed to treat cancer (AZEDRA®, 1095, and PSMA TTC); (2) prostate-specific membrane antigen (“PSMA”) targeted imaging agents for prostate cancer (1404 and PyL™); and (3) imaging analysis technology. We have two commercial products, RELISTOR® (methylnaltrexone bromide) subcutaneous injection for the treatment of opioid-induced constipation, which is partnered with Salix Pharmaceuticals, Inc. (a wholly-owned subsidiary of Bausch Health Companies Inc. (formerly known as Valeant Pharmaceuticals International, Inc.) (“Bausch”)); and AZEDRA, for the treatment of patients with unresectable, locally advanced or metastatic pheochromocytoma or paraganglioma (rare neuroendocrine tumors of neural crest origin) who require systemic anticancer therapy. We have licensed our exclusive rights to develop and commercialize methylnaltrexone, the active ingredient of RELISTOR, to Bausch and our PSMA antibody technology to Bayer AS, and have partnered other internally-developed or acquired compounds and technologies with third parties.

Our Corporate Information

Progenics, which has been listed on Nasdaq since 1997, was incorporated in Delaware in 1986, commenced principal operations in 1988, and throughout has been engaged primarily in research and development efforts, establishing corporate collaborations and related activities. Additional information concerning the Company is contained in the documents we file with the SEC. We maintain a website at www.progenics.com which contains information about Progenics and our subsidiaries. Information contained in or accessed through our website is not part of or incorporated into this prospectus or any accompanying prospectus supplement and should not be considered part of these documents.

Our mailing address is One World Trade Center, New York, New York 10007 (telephone number (646) 975-2500), where our principal executive offices are located.

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RISK FACTORS

An investment in our securities is speculative in nature and involves a high degree of risk. You should carefully consider the discussion of the material risks of investing in our securities contained in our filings with the SEC, including those identified under “Where You Can Find More Information”, as well as in any applicable prospectus supplement, in evaluating us and our business and prospects. You should also be aware that this document and other public statements we make may contain statements that do not relate strictly to historical fact, any of which may be forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, and should take into account the considerations relating to such statements referred to in Part I, Item 1A of our Annual Report, filed with the SEC on March 8, 2018, and Part II, Item 1A of our most recent Quarterly Report on Form 10-Q filed with the SEC on July 31, 2018, and other documents and public statements that we have filed or will file, in each case, that are incorporated by reference in this prospectus or accompanying prospectus supplement. Any of the risks and uncertainties set forth therein could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the trading price or value of our securities. As a result, you could lose all or part of your investment.

USE OF PROCEEDS

Unless we indicate otherwise in an accompanying prospectus supplement, we currently intend to use net proceeds from sales of securities to fund:

research and development activities, including clinical trials, for product candidates;

in-licensing of technology, establishment of research and development collaborations, and/or merger or acquisition opportunities; and/or

general corporate purposes, including working capital.

We may set forth additional information concerning our expected use of net proceeds from sales of securities in a prospectus supplement relating to the specific offering. Pending use of net proceeds as described above, we intend to invest net proceeds in interest-bearing, investment-grade securities.

An accompanying prospectus supplement may not identify precisely the amounts we plan to spend on each of the uses of proceeds listed above or any other uses of proceeds that we may identify in the prospectus supplement. In addition,

the amounts actually expended for each purpose may vary significantly depending upon numerous factors, including:

the costs and results of research, development and product candidate testing, including clinical trials;

costs and results of the regulatory approval process;

costs and structure of potential acquisitions, collaborations or other transactions;

the structure of and changes in our relationships with Salix, Ono and other licensors, licensees and collaborators;

the costs of filing, prosecuting, defending and enforcing patent claims;

manufacturing, marketing and other costs associated with commercialization of products; and

changes in the focus and direction of our research and development programs.

DIVIDEND POLICY

We have never paid any dividends, and we currently anticipate that all earnings, if any, will be retained for development of our business and no dividends will be declared in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

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The following table sets forth our ratios of earnings (loss) to combined fixed charges and preferred stock dividends for the periods indicated (dollars in thousands). For these ratios, “loss” is computed adding loss from operations and fixed charges. Fixed charges consist of an estimate of the interest within rental expense. We do not have any preferred stock outstanding as of the date of this prospectus, and therefore there are no preferred dividends included in our calculation of these ratios.

	Six Months Ended June 30, Years Ended December 31,					
	2018	2017	2016	2015	2014	2013
Ratio of earnings (loss) to fixed charges and preferred stock dividends	*	*	39	*	13	*
Coverage deficiency amount for total fixed charges and preferred stock dividends (1)	\$28,596	\$51,013	\$ —	\$39,119	—	\$42,934

For the years ended 2013, 2015 and 2017 and the six months ended June 30, 2018, the Company’s coverage ratio is (1) less than one-to-one and it must generate additional earnings of these specified amounts to achieve a coverage ratio of 1:1.

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GENERAL DESCRIPTION OF SECURITIES

We may offer shares of common and/or preferred stock, various series of debt securities, warrants and/or other rights to purchase securities, and/or units consisting of combinations of the foregoing from time to time under this prospectus, together with any applicable prospectus supplement, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. At the time we offer a type or series of securities, we will provide a prospectus supplement describing the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate principal amount or aggregate offering price;

voting or other rights;

rates and times of payment of interest, dividends or other payments;

original issue discount;

maturity;

ranking;

restrictive covenants;

redemption, conversion, exercise, exchange, settlement or sinking fund terms, including prices or rates, and any provisions or changes to or adjustments in such prices or rates and in the securities or other property receivable upon conversion, exercise, exchange or settlement;

any securities exchange or market listing arrangements; and

important U.S. federal income tax considerations.

This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement. The prospectus supplement may add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. We urge you to read the prospectus supplement related to any securities being offered.

We may sell the securities directly to or through underwriters, dealers or agents. We and our underwriters, dealers or agents reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement (i) the names of the underwriters or agents and applicable fees, discounts and commissions to be paid to them; (ii) details regarding over-allotment options, if any; and (iii) net proceeds to us.

The following descriptions are not complete and may not contain all the information you should consider before investing in any securities we may offer hereunder; they are summarized from, and qualified by reference to, Progenics' amended and restated certificate of incorporation, bylaws and the other documents referred to in the descriptions, all of which are or will be publicly filed with the SEC, as applicable. See "Where You Can Find More Information."

Capital Stock

Our authorized capital stock consists of 160 million shares of common stock, par value \$0.0013 per share, and 20 million shares of preferred stock, par value \$0.001 per share. As of September 30, 2018, there were 84,542,514 shares of common stock outstanding, 200,000 shares held in treasury and 6,405,063 shares reserved for issuance upon exercise of stock options granted under Company incentive plans. No shares of preferred stock are issued and outstanding.

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Common Stock. Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. As described in our proxy statement for each Annual Meeting of Stockholders, our By-Laws require that in order to be elected in uncontested elections, a director nominee must receive a majority of the votes cast with respect to such nominee (the number of shares voted “for” a director nominee must exceed the number of votes cast “against” that nominee); directors are elected by a plurality vote (*i.e.* , candidates receiving the most votes are elected regardless of whether they constitute a majority) in contested elections. Holders of common stock are not entitled to cumulative voting rights with respect to the election of directors, and as a consequence, minority stockholders are not able to elect directors on the basis of their votes alone. Subject to preferences that may be applicable to any shares of preferred stock currently outstanding or issued in the future which could adversely affect common stockholders as described below, holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor. In the event of liquidation, dissolution or winding up of the Company, holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then-outstanding preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable. American Stock Transfer and Trust Company is the transfer agent and registrar for our common stock.

Preferred Stock. Our board of directors has the authority, without further vote or action by the stockholders, to designate and issue shares of preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the common stock. We will fix in a certificate of designation the number of shares, the designation and the rights, preferences and privileges, including any dividend, conversion, voting or preemptive rights, terms of redemption, liquidation preferences and sinking fund terms, auction and remarketing procedures, and any transfer or other restrictions or limitations of or relating to any series of preferred stock that we sell under this prospectus and applicable prospectus supplements. The Delaware General Corporation Law (“DGCL”) provides that in addition to any voting rights that may be provided in the applicable certificate of designation, preferred stock holders have the right to vote separately as a class on a proposed amendment to our charter involving certain fundamental changes in their rights. Preferred stock terms could adversely affect the voting power or other rights of common stock holders and the likelihood that they would receive dividend or liquidation payments, and could have the effect of delaying, deferring or preventing a change in control. You should read the prospectus supplement and the certificate of designation relating to any series of preferred stock we may offer.

Anti-Takeover Effects of Provisions of Delaware Law and Our Charter Documents

Delaware Law

We are subject to the provisions of Section 203 of the DGCL, which, subject to certain exceptions, prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the interested stockholder attained such status with the approval of the board of directors or the business combination is

approved in a prescribed manner. A “business combination” includes a merger or asset sale involving or other transaction resulting in a financial benefit to the interested stockholder. Subject to various exceptions, an interested stockholder is a person who, together with affiliates and associates, owns, or within the past three years did own, 15% or more of a corporation’s voting stock. This statute could prohibit or delay the accomplishment of mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire the Company.

Charter Documents

Our bylaws provide that we will indemnify our directors and executive officers to the fullest extent permitted by Delaware law and that we may indemnify our other officers, employees and other agents. We may enter into indemnification contracts with our directors and officers and purchase insurance on behalf of any person whom we are required or permitted to indemnify. In addition, our charter provides that the liability of our directors for monetary damages shall be eliminated, except for (i) breach of the directors duty of loyalty to the Company or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) violating Section 174 of the DGCL, or (iv) any transaction from which the director derived an improper personal benefit. Pursuant to Delaware law and subject to the foregoing exceptions, our directors shall not be liable for monetary damages for breach of the directors’ fiduciary duty of care to the Company and its stockholders. This provision does not eliminate the duty of care: in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief remain available under Delaware law, and it does not affect a director’s responsibilities under any other law, such as U.S. federal securities laws or state or federal environmental or other laws.

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Debt Securities

We may issue debt securities from time to time, in one or more series, as senior, subordinated or junior subordinated, convertible or non-convertible and secured or unsecured debt. Any senior debt securities will rank equally with any unsubordinated debt. Subordinated debt securities will rank equally with any other subordinated debt of the same ranking we may issue. Convertible debt securities will be convertible into or exchangeable for our common stock or other securities at predetermined conversion rates, and conversion may be mandatory or at the holder's option.

Debt securities will be issued under one or more indentures — contracts between us and a national banking association or other eligible party acting as trustee. Following is a summary of certain general features of debt securities we may issue; we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement, which may differ from the terms we describe below. You should read the prospectus supplements, any free writing prospectus we may authorize and the indentures, supplemental indentures and forms of debt securities relating to any series of debt securities we may offer.

General. Except as we may otherwise provide in a prospectus supplement, the relevant indenture will provide that debt securities may be issued from time to time in one or more series. The indenture will not limit the amount of debt securities that may be issued thereunder, and will provide that the specific terms of any series of debt securities shall be set forth in, or determined pursuant to, an authorizing resolution, an officers' certificate and/or a supplemental indenture, if any, relating to such series.

We will describe in each prospectus supplement the following terms relating to any series of debt securities:

the title or designation;

whether they will be secured or unsecured, and the terms of any security;

whether the debt securities will be subject to subordination, and any terms thereof;

any limit upon the aggregate principal amount;

the date or dates on which the debt securities may be issued and on which we will pay the principal;

the interest rate, which may be fixed or variable, or the method for determining the rate, the date interest will begin to accrue, the date or dates interest will be payable and the record dates for interest payment dates or the method for determining them;

the manner in which the amounts of payment of principal of, premium or interest on the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies other than that in which the debt securities are denominated or designated to be payable or by reference to a commodity, commodity index, stock exchange index or financial index;

the currency of denomination;

if payments of principal of, premium or interest will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined;

the place or places where the principal of, premium, and interest will be payable, where debt securities of any series may be presented for registration of transfer, exchange or conversion, and where notices and demands to or upon the Company in respect of the debt securities may be made;

the form of consideration in which principal of, premium or interest will be paid;

the terms and conditions upon which we may redeem the debt securities;

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any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund, amortization or analogous provisions or at the option of a holder;

the dates on which and the price or prices at which we will repurchase the debt securities at the option of holders and other detailed terms and provisions of these obligations;

the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;

the portion of principal amount payable upon declaration of acceleration of the maturity date, if other than the principal amount;

whether the debt securities are to be issued at any original issuance discount and the amount of discount with which they may be issued;

whether the debt securities will be issued in certificated or global form and, in such case, the depositary and the terms and conditions, if any, upon which interests in such global security or securities may be exchanged in whole or in part for the individual securities represented thereby;

provisions, if any, for defeasance in whole or in part and any addition or change to provisions related to satisfaction and discharge;

the form of the debt securities;

the terms and conditions upon which convertible debt securities will be convertible or exchangeable into securities or property of the Company or another person, if at all, and any additions or changes, if any, to permit or facilitate the same;

provisions, if any, granting special rights to holders upon the occurrence of specified events;

any restriction or condition on transferability;

any addition or change in the provisions related to compensation and reimbursement of the trustee;

any addition to or change in the events of default described in this prospectus or in the indenture and any change in the acceleration provisions so described;

any addition to or change in the covenants described in this prospectus or in the indenture, including terms of any restrictive covenants; and

any other terms which may modify or delete any provision of the indenture.

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the U.S. federal income tax considerations and other special considerations applicable to any debt securities in the applicable prospectus supplement.

Conversion or Exchange Rights. We will set forth in the prospectus supplement the terms, if any, on which a series of debt securities may be convertible into or exchangeable for our common stock or other securities. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or other securities that the holders of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale; No Protection in Event of a Change of Control or Highly Leveraged Transaction. Except as we may otherwise provide in a prospectus supplement, the indenture will provide that we may not merge or consolidate with or into another entity, or sell other than for cash or lease all or substantially all our assets to another entity, or purchase all or substantially all the assets of another entity unless we are the surviving entity or, if we are not the surviving entity, the successor, transferee or lessee entity expressly assumes all of our obligations under the indenture or the debt securities, as appropriate.

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Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions that may afford holders additional protection in the event we have a change of control or in the event of a highly leveraged transaction (whether or not such transaction results in a change of control), which could adversely affect them.

Events of Default Under the Indenture. Except as we may otherwise provide in a prospectus supplement, the following will be events of default under the indenture with respect to any series of debt securities that we may issue:

if we fail to pay interest when due and our failure continues for 90 days and the time for payment has not been extended or deferred;

if we fail to pay the principal, or premium, if any, when due whether by maturity or called for redemption;

if we fail to pay a sinking fund installment, if any, when due and our failure continues for 30 days;

if we fail to observe or perform any other covenant relating to the debt securities, other than a covenant specifically relating to and for the benefit of holders of another series of debt securities, and our failure continues for 90 days after we receive written notice from the debenture trustee or holders of not less than a majority in aggregate principal amount of the outstanding series; and

if specified events of bankruptcy, insolvency or reorganization occur as to the Company.

No event of default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) will necessarily constitute an event of default with respect to any other series. The occurrence of an event of default may constitute an event of default under any bank credit agreements we may have in existence from time to time. In addition, the occurrence of certain events of default or an acceleration under the indenture may constitute an event of default under certain of our other indebtedness outstanding from time to time.

Except as we may otherwise provide in a prospectus supplement, if an event of default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than a majority in principal amount of the outstanding series may, by a notice in writing to us (and to the debenture trustee if given by the holders), declare to be due and payable immediately the principal (or, if the debt securities are discount securities, that portion of the principal amount as may be specified in the terms of such securities) of and premium and accrued and unpaid interest, if any, on all such debt securities. Before a judgment or decree for payment of the money due has been obtained with respect to any series, the holders of a majority in principal amount of that series (or, at a meeting of holders at which a quorum is present, the holders of a majority in principal amount represented at such meeting) may rescind and annul the acceleration if all events of default, other than the non-payment of accelerated principal,

premium, if any, and interest, if any, have been cured or waived as provided in the applicable indenture (including payments or deposits in respect of principal, premium or interest that had become due other than as a result of such acceleration) and the Company has deposited with the indenture trustee or paying agent a sum sufficient to pay all amounts owed to the indenture trustee under the indenture, all arrears of interest, if any, and the principal and premium, if any, on the debt securities that have become due other than by such acceleration. We refer you to the relevant prospectus supplement relating to any discount securities for the particular provisions relating to acceleration of a portion of the principal amount thereof upon the occurrence of an event of default.

Subject to the terms of the indenture, and except as we may otherwise provide in a prospectus supplement, if an event of default under the indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to that series, provided that, subject to the terms of the indenture, the debenture trustee need not take any action that it believes, upon the advice of counsel, might involve it in personal liability or might be unduly prejudicial to holders not involved in the proceeding.

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Except as we may otherwise provide in a prospectus supplement, a holder of the debt securities of any series will only have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies if:

the holder previously has given written notice to the debenture trustee of a continuing event of default with respect to that series;

the holders of at least a majority in aggregate principal amount outstanding of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and

the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount outstanding of that series (or at a meeting of holders at which a quorum is present, the holders of a majority in principal amount of such series represented at such meeting) other conflicting directions within 60 days after the notice, request and offer.

Except as we may otherwise provide in a prospectus supplement, these limitations will not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, them.

We will periodically file statements with the applicable debenture trustee regarding our compliance with specified covenants in the applicable indenture.

Modification of Indenture; Waiver. Except as we may otherwise provide in a prospectus supplement, the debenture trustee and the Company may, without the consent of any holders, execute a supplemental indenture to change the applicable indenture with respect to specific matters, including, among other things:

to surrender any right or power conferred upon the Company;

to provide, change or eliminate any restrictions on payment of principal of or premium, if any; provided that any such action shall not adversely affect the interests of the holders of debt securities of any series in any material respect;

to change or eliminate any of the provisions of the indenture; provided that any such change or elimination shall become effective only when there is no outstanding debt security created prior to the execution of such supplemental indenture that is entitled to the benefit of such provision and as to which such supplemental indenture would apply;

to evidence the succession of another entity to the Company;

to evidence and provide for the acceptance of appointment by a successor trustee with respect to one or more series of debt securities and to add or change provisions of the indenture to facilitate the administration of the trusts thereunder by more than one trustee;

to secure any series of debt securities;

to evidence any changes to the indenture regarding removal of the debenture trustee and appointment of a successor debenture trustee;

to cure any ambiguity, mistake, manifest error, omission, defect or inconsistency in the indenture or to conform the text of any provision in the indenture or in any supplemental indenture to any description thereof in the applicable section of a prospectus, prospectus supplement or other offering document that was intended to be a verbatim recitation of a provision of the indenture or of any supplemental indenture;

to add to or change or eliminate any provision of the indenture as shall be necessary or desirable in accordance with any amendments to the U.S. Trust Indenture Act of 1939, as amended;

to add guarantors or co-obligors with respect to any series of debt securities;

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to make any change in any series of debt securities that does not adversely affect in any material respect the interests of the holders thereof;

to provide for uncertificated debt securities in addition to certificated debt securities; and

to supplement any of the provisions of the indenture to such extent as shall be necessary to permit or facilitate the defeasance and discharge of any series of debt securities; provided that any such action shall not adversely affect the interests of holders of any debt securities.

In addition, and except as we may otherwise provide in a prospectus supplement, under the indenture the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount outstanding (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount represented at such meeting) that is affected. The debenture trustee and the Company may, however, make the following changes only with the consent of each holder of any outstanding debt securities affected:

extending the fixed maturity;

reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon redemption;

reducing the principal amount of discount securities payable upon acceleration of maturity;

making the principal of or premium or interest payable in currency other than that stated;

impairing the right to institute suit for the enforcement of any payment on or after the fixed maturity date;

materially adversely affecting the economic terms of any right to convert or exchange; and

reducing the percentage of debt securities, the holders of which are required to consent to any amendment or waiver; or modifying, without the written consent of the trustee, the rights, duties or immunities of the trustee.

Except for certain specified provisions, and except as we may otherwise provide in a prospectus supplement, the holders of at least a majority in principal amount of any series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount represented at such meeting) may, on behalf of the holders of all debt securities of that series, waive our compliance with provisions of the indenture. The holders of a

majority in principal amount of the outstanding debt securities of any series may, on behalf of all such holders, waive any past default under the indenture with respect to that series and its consequences, other than a default in the payment of the principal of, premium or any interest; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration.

Discharge. Except as we may otherwise provide in a prospectus supplement, the indenture will provide that we can elect to be discharged from our obligations with respect to one or more series of debt securities. In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, the premium, if any, and interest on, the debt securities of the affected series on the dates payments are due.

Form, Exchange and Transfer. Except as we may otherwise provide in a prospectus supplement, we will issue debt securities only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. Except as we may otherwise provide in a prospectus supplement, the indenture will provide that we may issue debt securities in temporary or permanent global form and as book-entry securities that will be deposited with a depositary named by us and identified in a prospectus supplement with respect to that series.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder will be able to exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

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Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities or the indenture, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

Except as we may otherwise provide in a prospectus supplement, if we elect to redeem the debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Debenture Trustee. The debenture trustee, other than during the occurrence and continuance of an event of default under the indenture, will undertake to perform only those duties as are specifically set forth in the indenture. Upon an event of default, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee will be under no obligation to exercise any of the powers given it by the indenture at the request of any holder unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents. Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of interest on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

Unless we otherwise indicate in the applicable prospectus supplement, we will pay principal of and any premium and interest at the office of the indenture trustee or, at the option of the Company, by check payable to the holder. Unless

we otherwise indicate in a prospectus supplement, we will designate the corporate trust office of the debenture trustee our sole paying agent for payments. We will name in the applicable prospectus supplement any other paying agents that we initially designate. We will maintain a paying agent in each place of payment.

All money we pay to a paying agent or the debenture trustee for the payment of principal or any premium or interest which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the security thereafter may look only to us for payment thereof.

Governing Law. The indenture and the debt securities will be governed and construed in accordance with the laws of the State of New York.

No Personal Liability of Directors, Officers, Employees and Stockholders. No incorporator, stockholder, employee, agent, officer, director or subsidiary of ours will have any liability for any obligations of ours or, due to the creation of any indebtedness under the debt securities, the indentures or supplemental indentures. The indentures provide that all such liability is expressly waived and released as a condition of, and as consideration for, the execution of such indentures and the issuance of the debt securities.

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Warrants, Other Rights and Units

We may from time to time issue warrants or other rights (together, Rights), in one or more series, for the purchase of common stock, preferred stock or debt securities. We may issue Rights independently or together with such securities (as such, Units), and such Rights may be attached to or separate from them. Rights will be evidenced by a Rights certificate issued under one or more Rights agreements between us and a Rights agent which will act solely as our agent in connection with the Rights and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of Rights. The forms of any such certificates and agreements will be filed as exhibits to the registration statement of which this prospectus is a part by amendment thereof or as exhibits to a Current Report on Form 8-K incorporated herein by reference, and the accompanying prospectus supplement and such forms may add, update or change the terms and conditions of the Rights or Units described in this prospectus. You should read the prospectus supplements, Rights agreements and Rights certificates that contain the terms of the Rights in their entirety.

The particular terms of each issue of Rights or Units will be described in the applicable prospectus supplement, including, as applicable:

the title of the Rights;

any initial offering price;

the title, aggregate principal amount or number and terms of the securities purchasable upon exercise of the Rights;

the principal amount or number of securities purchasable upon exercise of each Right and the price at which that principal amount or number may be purchased upon exercise of each Right;

the currency or currency units in which any offering price and the exercise price are payable;

the title and terms of any related securities with which the Rights are issued and the number of the Rights issued with each security;

any date on and after which the Rights and the related securities will be separately transferable;

any minimum or maximum number of Rights that may be exercised at any one time;

the date on which the right to exercise the Rights will commence and the date on which the right will expire;

a discussion of U.S. federal income tax, accounting or other considerations applicable to the Rights or Units;

whether the Rights represented by the Rights certificates will be issued in registered or bearer form and, if registered, where they may be transferred and registered;

any anti-dilution provisions of the Rights;

any redemption or call provisions applicable to the Rights;

any provisions for changes to or adjustments in the exercise price; and

any additional terms of the Rights, including terms, procedures and limitations relating to exchange and exercise of the Rights.

Rights certificates will be exchangeable for new Rights certificates of different denominations and, if in registered form, may be presented for registration of transfer, and Rights may be exercised, at the corporate trust office of the Rights agent or any other office indicated in the related prospectus supplement. Before the exercise of Rights, holders of Rights will not be entitled to payments of any dividends, principal, premium or interest on securities purchasable upon exercise of the Rights, to vote, consent or receive any notice as a holder of and in respect of any such securities or to enforce any covenants in any indenture, or to exercise any other rights whatsoever as a holder of securities purchasable upon exercise of the Rights.

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PLAN OF DISTRIBUTION

We may sell securities through underwriters or dealers, through agents, directly to one or more purchasers, in “at the market offerings”, within the meaning of Rule 415(a)(4) under the U.S. Securities Act of 1933, as amended (the “Securities Act”), to or through a market maker or into an existing trading market, or an exchange or otherwise, or by a combination of these methods. The accompanying prospectus supplement will describe the terms of any offering of securities, including:

the name or names of any underwriters;

the purchase price of the securities and the proceeds we will receive from the sale;

any over-allotment options pursuant to which underwriters may purchase additional securities from us;

any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;

any initial public offering price; and

any discounts or concessions allowed or reallocated or paid to dealers.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions, at a fixed public offering price or at varying prices determined at the time of the sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the securities offered by the prospectus supplement if any such securities are purchased. The underwriters may change from time to time the public offering price and any discounts or concessions allowed or reallocated or paid to dealers. We may use underwriters with whom we have a material relationship, and will describe any such relationships in the prospectus supplement naming such underwriter(s).

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe in the prospectus supplement any commissions that must be paid to the agent. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents, underwriters or dealers to solicit offers by certain purchasers to purchase securities at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The relevant prospectus supplement will set forth the conditions to these contracts and any commissions we must pay for solicitation of these contracts.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we may offer, other than common stock, will be new issues of securities with no established trading market. We may elect to list any series of securities on an exchange, and, in the case of our common stock, on any additional exchange, but, unless otherwise specified in the applicable prospectus supplement, we shall not be obligated to do so. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Rules of the SEC may limit the ability of any underwriters to bid for or purchase securities before the distribution of the securities is completed. Underwriters may, however, engage in the following activities in accordance with the rules:

Stabilizing transactions — Underwriters may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities, so long as stabilizing bids do not exceed a specified maximum.

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Over-allotments and syndicate covering transactions — Underwriters may sell more securities than those they have committed to purchase in an underwritten offering. This over-allotment creates a short position for the underwriters which may involve either “covered” short sales or “naked” short sales. Covered short sales are short sales made in an amount not greater than the underwriters’ over-allotment option to purchase additional securities in the offering, and may be closed out either by exercising the underwriter’s over-allotment option or by purchasing securities in the open market. In determining how they will close the covered short position, the underwriters will consider, among other things, the price of securities available for purchase in the open market as compared to the over-allotment option price. Naked short sales are short sales in excess of the over-allotment option, which the underwriters must close out by purchasing securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that, in the open market after pricing, there may be downward pressure on the price of the securities that could adversely affect investors who purchase securities in the offering.

Penalty bids — If underwriters purchase securities in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from other underwriters and selling group members who sold those securities as part of the offering.

Similar to other purchase transactions, an underwriter’s purchases to cover the syndicate short sales or to stabilize the market price of securities may have the effect of raising or maintaining the market price of securities or preventing or mitigating a decline in the market price. As a result, the price of the securities may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of securities if it discourages resales of the securities.

If commenced, the underwriters may discontinue at any time any of the activities described above.

Any underwriters who are qualified market makers on The Nasdaq Global Select Market may engage in passive market making transactions in our common stock on The Nasdaq Global Select Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must be identified as such and must comply with applicable volume and price limitations. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker’s bid, however, the passive market maker’s bid must then be lowered when certain purchase limits are exceeded.

In connection with the sale of our securities, underwriters or agents may receive compensation from us or from purchasers of the securities, for whom they may act as agents, in the form of discounts, concessions or commissions. Underwriters may sell securities to or through dealers, and these dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of securities may be deemed to be underwriters under the Securities Act, and any discounts or commissions they receive from us and any profit on the

resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act.

In compliance with guidelines of the Financial Industry Regulatory Authority, Inc., or FINRA, the amount of consideration or discount to be received by any FINRA member or independent broker dealer in connection with any offering of securities pursuant to this prospectus will be limited to an amount that is fair and reasonable, with such amount to be evaluated based on the size and type of the securities being offered as well as the risk assumed by such FINRA member or independent broker dealer, as the case may be.

To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states 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.

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LEGAL MATTERS

The legality of the securities being offered hereby is being passed upon for the Company by O'Melveny & Myers LLP. Any underwriters will also be advised on legal matters by their own counsel, who will be identified in an applicable prospectus supplement.

EXPERTS

The consolidated financial statements of Progenics appearing in Progenics' Annual Report on Form 10-K for the year ended December 31, 2017 (including schedule appearing therein), and the effectiveness of Progenics' internal control over financial reporting as of December 31, 2017, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, including therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

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\$250,000,000

Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Units

PROSPECTUS

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

SUBJECT TO COMPLETION, DATED OCTOBER 12, 2018

PROSPECTUS

Up to \$75,000,000 of Shares

Common Stock

On October 12, 2018, we have entered into a sales agreement with Cantor Fitzgerald & Co. (“Cantor”) relating to offer and sale of shares of our common stock offered by this prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$75,000,000 from time to time through Cantor, acting as agent.

Our common stock is listed on The Nasdaq Global Select Market under the symbol “PGNX”. On October 11, 2018, the last reported sale price of our common stock on The Nasdaq Global Select Market was \$5.58 per share.

Sales of our common stock, if any, under this prospectus may be made in sales deemed to be “at-the-market” equity offerings as defined in Rule 415 promulgated under the U.S. Securities Act of 1933, as amended (the “Securities Act”). Subject to the terms of the sales agreement, Cantor will act as sales agent and use commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between Cantor and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Cantor will be entitled to compensation at a fixed commission rate of 3.0% of the gross sales price per share sold. In connection with the sale of our common stock on our behalf, Cantor will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cantor will be deemed to be underwriting commissions or discounts.

Investing in our common stock involves a high degree of risk. Before making an investment decision, please read “Risk Factors” beginning on page 4 of this prospectus and in the documents incorporated by reference in this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2018.

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ABOUT THIS PROSPECTUS

This prospectus is part of a shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission (“SEC”). Under the shelf registration process, we may offer shares of our common stock having an aggregate offering price of up to \$75,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of the offering.

We provide information to you about this offering of shares of our common stock in two separate documents that are bound together: (1) this at-the-market sales agreement prospectus, which describes the specific details regarding this offering; and (2) the accompanying base prospectus, which provides general information, some of which may not apply to this offering. Generally, when we refer to this “prospectus”, we are referring to both documents combined. If information in this at-the-market sales agreement prospectus is inconsistent with the accompanying base prospectus, you should rely on this prospectus. However, if any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in this prospectus — the statement in the document having the later date modifies or supersedes the earlier statement as our business, financial condition, results of operations and prospects may have changed since the earlier dates.

You should rely only on the information contained in, or incorporated by reference into, this prospectus and in any free writing prospectus that we may authorize for use in connection with this offering. We have not, and Cantor, has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and Cantor is not, 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 may authorize 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. You should read this prospectus, the documents incorporated by reference into this prospectus, and any free writing prospectus that we may authorize for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common stock and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

In this prospectus, the terms “Progenics”, “Company”, “we”, “us”, “our” and similar terms refer to Progenics Pharmaceuticals, Inc., a Delaware corporation, and its subsidiaries unless the context otherwise requires.

This prospectus and the information incorporated herein by reference include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference in this prospectus are the property of their respective owners.

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PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in the securities covered by this prospectus. For a more complete understanding of Progenics and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus, including the information incorporated by reference in this prospectus and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information referred to under the heading “Risk Factors” in this prospectus beginning on page 4.

Our Company

We develop innovative medicines and other technologies to target, diagnose and treat cancer, including: (1) therapeutic agents designed to treat cancer (AZEDRA®, 1095, and PSMA TTC); (2) prostate-specific membrane antigen (“PSMA”) targeted imaging agents for prostate cancer (1404 and PyL™); and (3) imaging analysis technology. We have two commercial products, RELISTOR® (methylnaltrexone bromide) subcutaneous injection for the treatment of opioid-induced constipation, which is partnered with Salix Pharmaceuticals, Inc. (a wholly-owned subsidiary of Bausch Health Companies Inc. (formerly known as Valeant Pharmaceuticals International, Inc.) (“Bausch”)); and AZEDRA, for the treatment of patients with unresectable, locally advanced or metastatic pheochromocytoma or paraganglioma (rare neuroendocrine tumors of neural crest origin) who require systemic anticancer therapy. We have licensed our exclusive rights to develop and commercialize methylnaltrexone, the active ingredient of RELISTOR, to Bausch and our PSMA antibody technology to Bayer AS, and have partnered other internally-developed or acquired compounds and technologies with third parties.

Corporate Information

Progenics, which has been listed on Nasdaq since 1997, was incorporated in Delaware in 1986, commenced principal operations in 1988, and throughout has been engaged primarily in research and development efforts, establishing corporate collaborations and related activities. Additional information concerning the Company is contained in the documents we file with the SEC. We maintain a website at www.progenics.com which contains information about Progenics and our subsidiaries. Information contained in or accessed through our website is not part of or incorporated into this prospectus and should not be considered part of these documents.

Our mailing address is One World Trade Center, New York, New York 10007 (telephone number (646) 975-2500), where our principal executive offices are located.

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THE OFFERING

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$75,000,000.
Common stock to be outstanding after this offering	Up to 88,199,864 shares (as more fully described in the notes following this table), assuming sales of 13,440,860 shares of our common stock in this offering at an offering price of \$5.58 per share, which was the last reported sale price of our common stock on The Nasdaq Global Select Market on October 11, 2018. The actual number of shares issued will vary depending on the sales price under this offering.
Manner of offering	“At-the-market” offering that may be made from time to time through our sales agent, Cantor. See “Plan of Distribution” on page 10 of this prospectus.
Use of proceeds	We currently intend to use the net proceeds from this offering, if any, for research and development activities, general corporate purposes, capital expenditures and working capital. See “Use of Proceeds” on page 7 of this prospectus.
Nasdaq Global Select Market symbol	“PGNX”
Risk factors	Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page 4 of this prospectus.

The number of shares of our common stock shown above to be outstanding immediately after this offering is based on 74,759,004 shares outstanding as of June 30, 2018 and excludes as of such date:

6,773,331 shares of our common stock issuable upon the exercise of outstanding options, at a weighted average exercise price of \$7.15 per share;

7,329,870 shares of our common stock available for future issuance pursuant to our existing stock incentive plans;

9,090,909 shares of our common stock issued on August 10, 2018 pursuant to an underwriting agreement with Jefferies LLC and Credit Suisse Securities (USA) LLC, as representatives of the underwriters named therein; and

596,207 shares of our common stock issued from July 1, 2018 to the date of this prospectus pursuant to a Controlled Equity OfferingSM sales agreement, dated January 6, 2017 (the “2017 Cantor Sales Agreement”), by and between us and Cantor.

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RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks discussed below, together with the risks under the heading “Risk Factors” beginning on page 13 under Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on March 8, 2018, our subsequent Quarterly Reports on Form 10-Q, and our subsequent reports filed with the SEC, which are incorporated by reference into this prospectus, as well as the other information in this prospectus, the information and documents incorporated by reference and in any free writing prospectus that we have authorized for use in connection with this offering. If any of the identified risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects and the trading price of our securities. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial may also impair our business, financial condition, operating results and prospects and the trading price of our securities.

Risks Related to This Offering and our Common Stock

We have broad discretion in the use of the net proceeds from this offering.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways with which you may not agree. Accordingly, you will be relying on the judgment of our management with regard to the use of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the net proceeds will be invested or otherwise used in a way that does not yield a favorable, or any, return for the Company.

Investors in this offering will experience immediate and substantial dilution in the net tangible book value per share of the common stock they purchase.

Since the price per share of our common stock being offered is higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. See the section entitled “Dilution” in this prospectus for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering. In addition, we have a significant number of options outstanding. If the holders of these options exercise such options, you may incur further dilution.

Our stockholders may experience significant dilution as a result of future equity offerings and exercise of outstanding options.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

In addition, we have a significant number of securities convertible into, or allowing the purchase of, our common stock. As of June 30, 2018, 7,329,870 shares of common stock were reserved for future issuance under our stock incentive plans. As of that date, there were also options to purchase 6,773,331 shares of our common stock. The exercise of outstanding options having an exercise price per share that is less than the offering price per share in this offering will increase dilution to investors in this offering.

Future sales of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of June 30, 2018, we had 74,759,004 shares of common stock outstanding, all of which shares, other than shares held by our directors and certain officers, were eligible for sale in the public market, subject in some cases to compliance with the requirements of Rule 144 under the Securities Act, including the volume limitations and manner of sale requirements. In addition, shares of our common stock issuable upon exercise of outstanding options and shares reserved for future issuance under our stock incentive plans will become eligible for sale in the public market to the extent permitted by applicable vesting requirements and subject in some cases to compliance with the requirements of Rule 144.

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We have agreed, without the prior written consent of Cantor and subject to certain exceptions set forth in the sales agreement, not to sell or otherwise dispose of any of our common stock or securities convertible into or exchangeable for shares of our common stock, warrants or any rights to purchase or acquire our common stock during the period beginning on the fifth trading day immediately prior to the delivery of any placement notice by us to Cantor and ending on the fifth trading day immediately following the final settlement date with respect to the shares sold pursuant to such notice or in any other “at-the-market” or continuous equity transaction prior to the later of the termination of the sales agreement and the 30th day immediately following the final settlement day with respect to the shares sold pursuant to such notice. We have further agreed, subject to certain exceptions set forth in the sales agreement, not to sell or otherwise dispose of any shares of our common stock or securities convertible into or exchangeable for shares of common stock, warrants or any rights to purchase or acquire common stock in any other “at-the-market” or continuous equity transaction prior to the termination of the sales agreement with Cantor. It is possible that we could issue and sell additional shares of our common stock in the public markets. We cannot predict the effect that future sales of our common stock would have on the market price of our common stock.

We do not intend to pay dividends on our common stock. Until such time as we pay cash dividends, our stockholders must rely on increases in our stock price for appreciation.

We have never declared or paid dividends on our common stock. We intend to retain future earnings to develop and commercialize our products and product candidates. Therefore, we do not intend to pay cash dividends in the foreseeable future. Until such time as we determine to pay cash dividends on our common stock, our stockholders must rely on increases in the market price of our common stock for appreciation of their respective investments.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained or incorporated by reference in this prospectus constitute “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Statements contained in this communication that refer to our estimated or anticipated future results or other non-historical facts are forward-looking statements that reflect our current perception of existing trends and information as of the date of this communication. Forward looking statements generally will be accompanied by words such as “anticipate”, “believe”, “plan”, “could”, “should”, “estimate”, “expect”, “forecast”, “outlook”, “guidance”, “intend”, “may”, “might”, “will”, “possible”, “potential”, “project”, or other similar words, phrases or expressions. Such statements are predictions only, and are subject to risks and uncertainties that could cause actual events or results to differ materially.

Forward-looking statements involve known and unknown risks and uncertainties which may cause our actual results, performance or achievements to be materially different from those expressed or implied by forward-looking statements. While it is impossible to identify or predict all such matters, these differences between forward-looking statements and our actual results, performance or achievement may result from, among other things, the inherent uncertainty of the timing and success of, and expense associated with, research, development, regulatory approval and commercialization of our products and product candidates, including the risks that clinical trials will not commence or proceed as planned; products which appear to be promising in early trials will not demonstrate efficacy or safety in larger-scale trials; clinical trial data on our products and product candidates will be unfavorable; our products will not receive marketing approval from regulators or, if approved, do not gain sufficient market acceptance to justify development and commercialization costs; the sales of RELISTOR, AZEDRA and other products by us and our partners, and the revenue and income generated for us thereby, may not meet expectations; competing products currently on the market or in development might reduce the commercial potential of our products; we, our collaborators or others might identify side effects after the product is on the market; or efficacy or safety concerns regarding marketed products, whether or not originating from subsequent testing or other activities by us, governmental regulators, other entities or organizations or otherwise, and whether or not scientifically justified, may lead to product recalls, withdrawals of marketing approval, reformulation of the product, additional pre-clinical testing or clinical trials, changes in labeling of the product, the need for additional marketing applications, declining sales or other adverse events.

We are also subject to risks and uncertainties associated with the actions of our corporate, academic and other collaborators and government regulatory agencies, including risks from market forces and trends; potential product liability; intellectual property, litigation and other dispute resolution, environmental and other risks; the risk that we may not be able to obtain sufficient capital, recruit and retain employees, enter into favorable collaborations or transactions, or other relationships or that existing or future relationships or transactions may not proceed as planned; the risk that current and pending patent protection for our products may be invalid, unenforceable or challenged, or fail to provide adequate market exclusivity, or that our rights to in-licensed intellectual property may be terminated for our failure to satisfy performance milestones; the risk of difficulties in, and regulatory compliance relating to, manufacturing products; and the uncertainty of our future profitability.

Risks and uncertainties to which we are subject also include general economic conditions, including interest and currency exchange-rate fluctuations and the availability of capital; changes in generally accepted accounting principles; the impact of legislation and regulatory compliance; the highly regulated nature of our business, including government cost-containment initiatives and restrictions on third-party payments for our products; trade buying patterns; the competitive climate of our industry; and other factors set forth in this document and other reports filed with the SEC. In particular, we cannot assure you that AZEDRA or RELISTOR will be commercially successful or be approved in the future in other formulations, indications or jurisdictions, or that any of our other programs will result in a commercial product.

Although we believe that our expectations are based on reasonable assumptions within the bounds of our current knowledge of our industry, business and operations, we cannot guarantee that actual results will not differ materially from our expectations. In evaluating such forward-looking statements, you should specifically consider various factors, including the risks outlined under the heading “Risk Factors” contained in any accompanying prospectus supplement and in our Annual Report on Form 10-K for the year ended December 31, 2017 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018. The discussion of risks and uncertainties set forth in those filings is not necessarily a complete or exhaustive list of all risks facing us at any particular point in time. We operate in a highly competitive, highly regulated and rapidly changing environment, and our business is in a state of evolution. Therefore, it is likely that over time new risks will emerge and the nature and elements of existing risks will change. It is not possible for management to predict all such risk factors or changes therein or to assess either the impact of all such risk factors on our business or the extent to which any individual risk factor, combination of factors or new or altered factors may cause results to differ materially from those contained in any forward-looking statement. Forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should carefully read this prospectus and any accompanying prospectus supplement, together with the information incorporated herein or therein by reference, and with the understanding that our actual future results may materially differ from what we expect.

Except as required by law, forward-looking statements speak only as of the date they are made. We do not have a policy of updating or revising forward-looking statements and, except as expressly required by law, we disclaim any intent or obligation to update or revise any statements as a result of new information or future events or developments. It should not be assumed that our silence over time means that actual events are bearing out as expressed or implied in forward-looking statements.

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USE OF PROCEEDS

The amount of proceeds from this offering will depend upon the number of shares of our common stock sold and the market price at which they are sold. There can be no assurance that we will be able to sell any shares under, or fully utilize, the sales agreement with Cantor as a source of financing.

We currently intend to use the net proceeds from this offering, if any, for research and development activities, general corporate purposes, capital expenditures and working capital. We may also use a portion of the net proceeds to acquire or invest in businesses, products or technologies that are complementary to our own. We regularly consider such opportunities but are not currently negotiating any such transactions. The amount and timing of these expenditures will depend on a number of factors, such as the timing, scope, progress and results of our research and development efforts, the timing and progress of any partnership efforts, and the competitive environment for our product candidates.

As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering, if any. As a result, our management will have broad discretion regarding the timing and application of the net proceeds from this offering. Pending the application of the net proceeds, we intend to invest the net proceeds in short-term, investment grade, interest-bearing securities.

Table of Contents**DILUTION**

If you invest in our common stock, you will experience dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of June 30, 2018 was approximately \$19.5 million, or \$0.26 per share of our common stock. Net tangible book value per share as of June 30, 2018 is equal to our total tangible assets minus total liabilities, all divided by the number of shares of common stock outstanding as of June 30, 2018.

After giving effect to the sale of our common stock in the aggregate amount of \$75,000,000 in this offering at an assumed offering price of \$5.58 per share, the last reported sale price of our common stock on The Nasdaq Global Select Market on October 11, 2018, and after deducting commissions and estimated aggregate offering expenses payable by us, our as adjusted net tangible book value would have been approximately \$92.0 million, or approximately \$1.04 per share of common stock, as of June 30, 2018. This represents an immediate increase in net tangible book value of approximately \$0.78 per share to existing stockholders and an immediate dilution of approximately \$4.54 per share to investors in this offering. The following table illustrates this calculation on a per share basis.

Assumed public offering price per share	\$5.58
Net tangible book value per share as of June 30, 2018	\$0.26
Increase in net tangible book value per share attributable to this offering	\$0.78
As adjusted net tangible book value per share as of June 30, 2018, after giving effect to this offering	\$1.04
Dilution per share to new investors purchasing shares in this offering	\$4.54

The table above assumes for illustrative purposes that an aggregate of 13,440,860 shares of our common stock are sold at a price of \$5.58 per share, the last reported sale price of our common stock on The Nasdaq Global Select Market on October 11, 2018, for aggregate gross proceeds of \$75,000,000. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of \$0.50 per share in the price at which the shares are sold from the assumed offering price of \$5.58 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$75,000,000 is sold at that price, would increase our adjusted net tangible book value per share after the offering to \$1.06 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$5.02 per share, after deducting commissions and estimated aggregate offering expenses payable by us. A decrease of \$0.50 per share in the price at which the shares are sold from the assumed offering price of \$5.58 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$75,000,000 is sold at that price, would decrease our adjusted net tangible book value per share after the offering to \$1.03 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$4.05 per share, after deducting commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only.

The number of shares of our common stock shown above to be outstanding immediately after this offering is based on 74,759,004 shares outstanding as of June 30, 2018 and excludes as of such date:

6,773,331 shares of our common stock issuable upon the exercise of outstanding options, at a weighted average exercise price of \$7.15 per share;

7,329,870 shares of our common stock available for future issuance pursuant to our existing stock incentive plans;

9,090,909 shares of our common stock issued on August 10, 2018 pursuant to an underwriting agreement with Jefferies LLC and Credit Suisse Securities (USA) LLC, as representatives of the underwriters named therein; and

596,207 shares of our common stock issued from July 1, 2018 to the date of this prospectus pursuant to the 2017 Cantor Sales Agreement.

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. The exercise of outstanding options and warrants having an exercise price per share that is less than the offering price per share in this offering will increase dilution to investors in this offering.

Table of Contents**PRICE RANGE OF OUR COMMON STOCK**

Our common stock trades on The Nasdaq Global Select Market under the symbol “PGNX”. The following table sets forth, for the periods indicated, the reported high and low sale prices per share of our common stock on The Nasdaq Global Select Market.

<u>Period</u>	High	Low
<u>Year Ended December 31, 2018</u>		
First Quarter	\$8.63	\$5.01
Second Quarter	9.12	6.48
Third Quarter	9.42	5.45
Fourth Quarter (October 1 to October 11)	6.54	5.52

<u>Year Ended December 31, 2017</u>		
First Quarter	11.72	8.15
Second Quarter	9.56	6.10
Third Quarter	7.39	4.60
Fourth Quarter	7.81	5.16

<u>Year Ended December 31, 2016</u>		
First Quarter	6.13	3.61
Second Quarter	5.75	4.00
Third Quarter	7.09	4.19
Fourth Quarter	9.78	4.84

<u>Year Ended December 31, 2015</u>		
First Quarter	7.84	5.35
Second Quarter	9.27	4.86
Third Quarter	11.15	5.38
Fourth Quarter	8.37	5.20

On October 11, 2018, the last reported sale price of our common stock on The Nasdaq Global Select Market was \$5.58 per share. There were approximately 63 holders of record of our common stock as of October 11, 2018.

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PLAN OF DISTRIBUTION

On October 12, 2018, we have entered into a Controlled Equity OfferingSM sales agreement with Cantor under which we may issue and sell shares of our common stock having an aggregate gross sales price of up to \$75,000,000 from time to time through Cantor, acting as agent. The sales agreement has been filed as an exhibit to our registration statement on Form S-3 of which this prospectus forms a part.

Upon delivery of a placement notice and subject to the terms and conditions of the sales agreement, Cantor may sell our common stock by any method permitted by law deemed to be an “at-the-market” offering as defined in Rule 415 promulgated under the Securities Act. We may instruct Cantor not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or Cantor may suspend the offering of common stock upon notice and subject to other conditions.

We will pay Cantor commissions, in cash, for its services in acting as agent in the sale of our common stock. Cantor will be entitled to compensation at a fixed commission rate of 3.0% of the gross proceeds from each sale of our common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse Cantor for certain specified expenses, including the fees and disbursements of its legal counsel in an amount not to exceed \$50,000. We estimate that the total expenses for the offering, excluding compensation and reimbursements payable to Cantor under the terms of the sales agreement, will be approximately \$225,000.

Settlement for sales of common stock will occur on the third business day following the date on which any sales are made, or on some other date that is agreed upon by us and Cantor in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and Cantor may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Cantor will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase the common stock shares under the terms and subject to the conditions set forth in the sales agreement. In connection with the sale of the common stock on our behalf, Cantor will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cantor will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Cantor against certain civil liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the sales agreement will terminate upon the earlier of (i) the sale of all shares of our common stock subject to the sales agreement, (ii) the third anniversary of the date of the sales

agreement, or (iii) termination of the sales agreement as permitted therein. We and Cantor may each terminate the sales agreement at any time upon ten days prior notice.

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

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

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by O'Melveny & Myers LLP. Cantor is being represented in connection with this offering by Latham & Watkins LLP, San Diego, California.

EXPERTS

The consolidated financial statements of Progenics appearing in Progenics' Annual Report on Form 10-K for the year ended December 31, 2017 (including schedule appearing therein), and the effectiveness of Progenics' internal control over financial reporting as of December 31, 2017, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, including therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

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WHERE YOU CAN FIND MORE INFORMATION

This prospectus does not contain all of the information set forth in the registration statement and its exhibits and schedules in accordance with SEC rules and regulations. For further information with respect to us and the securities being offered hereby, you should read the registration statement, including its exhibits and schedules. Statements contained in this prospectus, including documents that we have incorporated by reference, as to the contents of any contract or other document referred to are not necessarily complete, and, with respect to any contract or other document filed as an exhibit to the registration statement or any other such document, each such statement is qualified in all respects by reference to the corresponding exhibit. You should review the complete document to evaluate these statements. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database or our website, or at the offices of the SEC, where they may be examined without charge at the Public Reference Room, at the address listed below, or obtained upon payment of the prescribed fees.

We file annual, quarterly and current reports, proxy statements and other documents with the SEC under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"). The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including Progenics, that file electronically with the SEC. You may obtain documents that we file with the SEC at www.sec.gov and read and copy them at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549 (information on operation of the Public Reference Room is available by calling the SEC at 1-800-SEC-0330).

We also make these documents available on our website at www.progenics.com. Our website and the information contained or connected to our website is not incorporated by reference in this prospectus and you should not consider it a part of this prospectus.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules permit us to incorporate by reference information in this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus, except for information superseded by information contained in this prospectus itself or in any subsequently filed incorporated document. This prospectus incorporates by reference the documents set forth below that we have previously filed with the SEC (Commission File No. 0-23143), other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about Progenics and its business and financial condition.

our Annual Report on Form 10-K for the year ended December 31, 2017 (“Annual Report”);

the information specifically incorporated by reference into our Annual Report from our Definitive Proxy Statement on Schedule 14A for our 2018 Annual Meeting of Shareholders;

our Quarterly Reports on Form 10-Q for the periods ended March 31 and June 30, 2018;

our Current Reports on Form 8-K filed on March 22, 2018, May 11, 2018, May 31, 2018, June 14, 2018, July 3, 2018, August 7, 2018 (with respect to Item 8.01 only) and August 10, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A, dated September 29, 1997, including any amendments or reports filed for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) after the date of the initial registration statement and prior to the effectiveness of the registration statement and subsequent to the date of this prospectus and prior to the termination of the offering covered by this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing of such documents.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus, modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus. Prospective investors may obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone from us at our executive offices at:

Progenics Pharmaceuticals, Inc.
One World Trade Center
New York, New York 10007
(646) 975-2500
Attention: Investor Relations and Corporate Communications

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**Up to \$75,000,000 of Shares of
Common Stock**

PROSPECTUS

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

Set forth below is an estimate (except in the case of the SEC registration fee) of the amount of fees and expenses to be incurred in connection with the issuance and distribution of the offered securities, other than underwriting discounts and commissions.

SEC registration fee	\$29,562 (1)
Accounting fees and expenses	(2)
Legal fees and expenses	(2)
Printing expenses	(2)
Transfer agent and registrar fees	(2)
Miscellaneous	(2)
Total	\$ (2)

(1) Inclusive of the registration fee of \$16,139 previously paid in connection with the Unsold Securities.

(2) Since an indeterminate amount or number of securities and/or transactions may be covered by this registration statement, expenses of issuance and distribution of the securities are not currently determinable.

Item 15. Indemnification of Directors and Officers.

Section 145(a) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit or proceeding 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.

Section 145(b) provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses actually and reasonably incurred by him or her in connection with the defense or settlement of such action or suit if he or she acted under similar standards, except that no indemnification may be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine that despite the adjudication of liability, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Section 145 further provides that (i) to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue, or matter therein, he or she shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection therewith; (ii) indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and (iii) the corporation may purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against him or her or incurred by him or her in any such capacity or arising out of his or her status as such whether or not the corporation would have the power to indemnify him or her against such liabilities under Section 145.

Section 102(b)(7) of the DGCL provides that a corporation in its original certificate of incorporation or an amendment thereto validly approved by stockholders may eliminate or limit personal liability of members of its board of directors or governing body for breach of a director's fiduciary duty. No such provision, however, may eliminate or limit the liability of a director for breaching his or her duty of loyalty, failing to act in good faith, engaging in intentional misconduct or knowingly violating a law, paying a dividend or approving a stock repurchase which was illegal, or obtaining an improper personal benefit. A provision of this type has no effect on the availability of equitable remedies, such as injunction or rescission, for breach of fiduciary duty. The Registrant's Amended and Restated Certificate of Incorporation contains such a provision.

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The Registrant's Amended and Restated Certificate of Incorporation and By-Laws provide that the Registrant shall indemnify officers, directors, employees and agents of the Registrant, to the full extent permitted by and in the manner permissible under the laws of the State of Delaware. In addition, the By-Laws permit the Board of Directors to authorize the Registrant to purchase and maintain insurance against any liability asserted against any director, officer, employee or agent of the Registrant arising out of his or her capacity as such.

The Registrant has entered into Indemnification Agreements with each of its officers and directors, pursuant to which the Registrant has agreed to indemnify and advance expenses to such officers and directors to the fullest extent permitted by applicable law.

The Registrant has obtained an insurance policy providing coverage for certain liabilities of its officers and directors.

Item 16. Exhibits.

Exhibit

Description of Exhibit

Number

- 1.1 Sales Agreement, dated October 12, 2018, by and between Registrant and Cantor Fitzgerald & Co.
- 1.2† Form(s) of underwriting agreement(s).
- 3(i) Amended and Restated Certificate of Incorporation of the Registrant (previously filed in Current Report on Form 8-K dated June 13, 2013).
- 3(ii) Amended and Restated By-laws of the Registrant (previously filed in Current Report on Form 8-K dated March 16, 2012).
- 4.1 Form of Indenture.
- 4.2† Form(s) of Rights Agreement(s) (including form(s) of Rights).
- 4.3 Specimen Certificate for Common Stock, \$0.0013 par value per share, of the Registrant (previously filed in Registration Statement on Form S-1, Commission File No. 333-13627).
- 4.4† Form of Certificate of Designation of Preferred Stock.
- 4.5† Form of Certificate for Preferred Stock.
- 4.6† Form of Unit Agreement (including form of Units).

- 5.1 Opinion of O'Melveny & Myers LLP.
- 12.1 Statement Regarding the Computation of Ratio of Earnings to Fixed Charges.
- 23.1 Consent of O'Melveny & Myers LLP (included in Exhibit 5.1).
- 23.2 Consent of Ernst & Young LLP.
- 24.1 Power of Attorney (included in Signature Page).
- 25.1†† Statement of Eligibility of Trustee on Form T-1.

To be filed by amendment or as exhibit(s) to a Current Report of the Registrant on Form 8-K and incorporated herein by reference, as applicable.

To be filed pursuant to Section 305(b)(2) of the U.S. Trust Indenture Act of 1939, as applicable.

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Item 17. Undertakings.

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 of 1933;

(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.

(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) do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 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 of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(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 of 1933 to any purchaser:

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

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

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

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

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(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

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

The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under section 305(b)(2) of the Trust Indenture Act.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the U.S. Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, 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.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on October 12, 2018.

PROGENICS PHARMACEUTICALS, INC.

By: /s/ Mark R. Baker
Mark R. Baker
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each of the persons whose names appear below constitutes and appoints Mark R. Baker and Patrick Fabbio, and each of them, such person's true and lawful attorney in fact and agent, with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to execute any and all amendments (including post-effective amendments) to this Registration Statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the U.S. Securities Act of 1933), and to file the same, together with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, and such other agencies, offices and persons as may be required by applicable law, granting unto said attorney in fact and agent, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that each said attorney-in-fact and agent may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

/s/ Peter J. Crowley Peter J. Crowley	Chairman of the Board	October 12, 2018
/s/ Mark R. Baker Mark R. Baker	Chief Executive Officer and Director (Principal Executive Officer)	October 12, 2018
/s/ Patrick Fabbio	Senior Vice President and Chief Financial Officer	October 12, 2018

Patrick Fabbio (Principal Financial and Accounting Officer)

/s/ Bradley L. Campbell Director October 12, 2018
Bradley L. Campbell

/s/ Karen Jean Ferrante, M.D. Director October 12, 2018
Karen Jean Ferrante, M.D.

/s/ Michael D. Kishbauch Director October 12, 2018
Michael D. Kishbauch

/s/ David A. Scheinberg Director October 12, 2018
David A. Scheinberg

/s/ Nicole S. Williams Director October 12, 2018
Nicole S. Williams

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