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

FORM S-3

**REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933**

Novus Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-1000967
(I.R.S. Employer
Identification Number)

**1990 MacArthur Blvd., Suite 550
Irvine, California 92612
(949) 238-8090**

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

**Gregory J. Flesher
President and Chief Executive Officer
1990 MacArthur Blvd., Suite 550
Irvine, California 92612
(949) 238-8090**

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

With a copy to:
**Ryan A. Murr
Gibson, Dunn & Crutcher LLP
555 Mission St., Suite 3000
San Francisco, CA 94105-0921
Telephone: (415) 393-8200
Facsimile: (415) 393-8306**

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective, as determined by the Selling Stockholders.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, 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, please 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 (do not check if a smaller reporting company) 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 the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Unit(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee
Common Stock, \$0.001 par value	400,398 shares	\$5.38	\$2,154,141	\$249.66

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers such additional securities as may become issuable to prevent dilution resulting from stock splits, stock dividends and similar events.
- (2) Pursuant to Rule 457(c), calculated on the basis of the average of the high and low prices per share of the Registrant's Common Stock reported on the Nasdaq Capital Market on June 16, 2017.

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.

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

Subject to Completion, dated June 23, 2017

Prospectus

Novus Therapeutics, Inc.

400,398 shares of Common Stock

This prospectus covers the sale of an aggregate of 400,398 shares of our Common Stock, \$0.001 par value per share (the “Shares”), by the selling security holders identified in this prospectus (collectively with any of the holders’ transferees, pledgees, donees or successors, the “Selling Stockholders”). The Shares covered by this prospectus were issued at the closing of a Stock Purchase Agreement (the “Stock Purchase Agreement”) by and among the Company and each of those persons and entities, severally and not jointly, listed as a Purchaser on the Schedule of Purchasers thereto, with a closing date of May 10, 2017 (the “Closing Date”).

The Company will not receive any proceeds from the sale by the Selling Stockholders of the Shares. We are paying the cost of registering the Shares covered by this prospectus as well as various related expenses. The Selling Stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of its shares.

Sales of the Shares by the Selling Stockholders may occur at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. The Selling Stockholders may sell shares to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the Selling Stockholders, the purchasers of the shares, or both. If required, the number of shares to be sold, the public offering price of those shares, the names of any underwriters, broker-dealers or agents and any applicable commission or discount will be included in a supplement to this prospectus, called a prospectus supplement.

The Company’s Common Stock is traded on The Nasdaq Capital Market under the symbol “NVUS.” On June 22, 2017, the closing sale price of our Common Stock on The Nasdaq Capital Market was \$6.04 per share. Our principal executive offices are located at 19900 MacArthur Boulevard, Suite 550, Irvine, California 92612, and our telephone number is (949) 238-8090.

Investing in our securities involves a high degree of risk. You should carefully consider the Risk Factors included herein before you invest in our securities.

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

The date of this prospectus is June , 2017

ABOUT THIS PROSPECTUS

You should read this prospectus, any applicable prospectus supplement and the information incorporated by reference in this prospectus before making an investment in the securities of Novus Therapeutics, Inc. See “Where You Can Find More Information” for additional information. You should rely only on the information contained in or incorporated by reference in this prospectus or a prospectus supplement. The Company has not authorized anyone to provide you with different information. This document may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that information contained in this prospectus, or in any document incorporated by reference, is accurate only as of any date on the front cover of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains certain forward-looking statements within the meaning of federal securities laws, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this prospectus except for historical information may be deemed to be forward-looking statements. Without limiting the generality of the foregoing, words such as “may,” “will,” “expect,” “believe,” “anticipate,” “intend,” “could,” “estimate,” or “continue” or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1 (Business) and Item 1A (Risk Factors) of Part I and Item 7 (Management’s Discussion and Analysis of Financial Condition and Results of Operations) of Part II of our most recent Annual Report on Form 10-K, factors described under the section captioned “Risk Factors” in this prospectus, as may be updated from time to time by our future filings under the Securities Exchange Act, and elsewhere in the documents incorporated by reference in this prospectus. Readers should carefully review these risks, as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to place undue reliance on such forward-looking information. Except as may be required by law, we disclaim any intent to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

ABOUT THE COMPANY

Unless otherwise noted: (1) the term “Novus Therapeutics” refers to Novus Therapeutics, Inc., a Delaware corporation, formerly known as Tokai Pharmaceuticals, Inc., (2) the terms “Novus,” the “Company,” “we,” “us,” and “our,” refer to the ongoing business operations of Novus Therapeutics and its subsidiaries, including Otic Pharma, Ltd., whether such activities are conducted through Novus Therapeutics or a subsidiary of the company, and (3) the term “Common Stock” refers to shares of Novus Therapeutics’ Common Stock and the term “stockholder(s)” refers to the holders of Common Stock or securities exercisable for Common Stock.

We are a clinical-stage, specialty pharmaceutical company focused on the acquisition and development of products for disorders of the ear, nose, and throat (“ENT”). We have two novel technologies that are initially being developed for conditions of the ear.

OP-01 is a foam-based technology. It is being developed by us with the intent to be used as a delivery vehicle for drugs which are to be placed into the ears, as well as the nasal and sinus cavities. OP-01 is currently being

developed as an improved treatment option for acute otitis externa (“AOE” or “swimmers ear”), a common medical condition of the outer ear canal that globally affects tens of millions of adults and children every year. OP-01 has been tested in four clinical trials involving 353 subjects, including a successful phase 2b study with a steroid-free, antibiotic-only formulation of OP-01 that performed similarly to standard of care. We have suspended the development of the prior formulation of OP-01 in order to modify the formulation to create a clinically differentiated, best-in-class product for AOE that has the potential to represent an improvement to the current standard of care.

OP-02 is a surfactant-based technology. It was originally developed by Otodyne, Inc. and subsequently licensed to us in November 2015. OP-02 is currently being developed as a potential first-in-class treatment option for patients with otitis media (“OM”) and Eustachian tube dysfunction (“ETD”). OM and ETD are common medical conditions of the middle ear that globally affects more than 700 million adults and children every year. OM is a common disorder seen in pediatric practice and is the most frequent reason children are prescribed antibiotics and undergo surgery. OP-02 is a daily nasal spray, designed to improve and maintain the Eustachian tube’s ability to drain and ventilate the middle ear. We are currently developing a formulation of OP-02 to be used in human clinical trials and expect to conduct two phase 1 clinical studies in 2018 to explore the safety and tolerability of OP-02, including one study that will explore how OP-02 affects Eustachian tube function (pharmacodynamics). These phase 1 studies will evaluate single and repeated intranasal doses of OP-02 in adults. Subject to successful completion of these studies, we intend to initiate phase 2 studies of OP-02, with a focus on prevention of acute, recurrent, and/or chronic OM in children.

Our executive offices are located at 19900 MacArthur Boulevard, Suite 550, Irvine, California 92612, and our telephone number is (949) 238-8090. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See “Where You Can Find More Information” and “Incorporation of Certain Information by Reference”.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described in the sections entitled “Risk Factors” in our most recent Annual Report on Form 10-K, subsequent Quarterly Reports on Form 10-Q, and our definitive proxy statement on Schedule 14A, dated as of April 7, 2017, in each case as filed with the SEC, which are incorporated herein by reference in their entirety, as well as any amendment or updates to our risk factors reflected in subsequent filings with the SEC, including the applicable prospectus supplement. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus. For more information, see the section entitled “Where You Can Find More Information.”

USE OF PROCEEDS

The proceeds from the resale of the Shares under this prospectus are solely for the accounts of the Selling Stockholders. We will not receive any proceeds from the sale of Shares under this prospectus.

SELLING SECURITYHOLDERS

The Company has included in this prospectus 400,398 shares of Common Stock, which were originally issued to the Selling Stockholders as set forth in the Stock Purchase Agreement by and among the Company and each of those persons and entities, severally and not jointly, listed as a Purchaser on the Schedule of Purchasers thereto, which closing took place on the Closing Date.

Pursuant to the Stock Purchase Agreement, dated as of January 31, 2017, the Company agreed to issue 3,603,601 shares of Novus common stock at a purchase price of \$1.11 per share (in each case, not giving effect to the Reverse Stock Split). On May 11, 2017, the Company effected a reverse stock split of its outstanding Common Stock at a ratio of 1-for-9 (the “Reverse Stock Split”), which effectively resulted in the sale by the Company of 400,398 shares of Common Stock at a price of \$9.99 per share. The Shares being registered on this Form S-3 give effect to the Reverse Stock Split.

In connection with the transactions contemplated by the Stock Purchase Agreement, we agreed to file a registration statement with the Securities and Exchange Commission covering the resale of the Shares.

The following table sets forth certain information regarding the Selling Stockholders and the shares of Common Stock beneficially owned by each person or entity, which is based on information that is available to us as of June 1, 2017. The Selling Stockholders may offer shares under this prospectus from time to time and may elect to sell none, some or all of the shares set forth next to its name. As a result, we cannot estimate the number of shares of Common Stock that the Selling Stockholders will beneficially own after termination of sales under this prospectus. In addition, the Selling Stockholders may have sold, transferred or otherwise disposed of all or a portion of such holder’s shares of Common Stock since the date on which it provided information for this table. We have not made independent inquiries about this.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options or warrants that are currently exercisable or exercisable within 60 days of June 1, 2017 are considered outstanding and beneficially owned by the person holding the options or warrants for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person.

We are relying on written commitments from the Selling Stockholders to notify us of any changes in its beneficial ownership after the date it originally provided this information. See “Plan of Distribution”.

Selling Security Holder(1)	# of Shares held before Offering	# Shares Being Offered	# of Shares held after Offering(2)	Percentage of Shares After Offering(2)
Peregrine Ventures Management	696,444	200,200	496,244	7.1%
Pontifax (Israel) III L.P.	531,149	68,241	462,908	6.7%
Pontifax (Cayman) III L.P.	256,199	31,858	224,341	3.2%
Gregory J. Flesher	140,254	58,958	81,296	1.2%
Catherine C. Turkel	29,911	11,111	18,800	*
Christine Ocampo	26,269	10,010	16,259	*
Michael Cruse	27,652	15,015	12,637	*
Mai Sirimanne	11,377	5,005	6,372	*

* Less than one percent (1%) of outstanding Common Stock.

- (1) If required, information about other selling security holders, except for any future transferees, pledgees, donees or successors of the selling security holder named in the table above, will be set forth in a prospectus supplement or amendment to the registration statement of which this prospectus is a part. Additionally, post-effective amendments to the registration statement will be filed to disclose any material changes to the plan of distribution from the description contained in the final prospectus.
- (2) Assumes all shares offered by the Selling Stockholders hereby are sold and that the Selling Stockholders buy or sell no additional shares of Common Stock prior to the completion of this offering.

PLAN OF DISTRIBUTION

The Selling Stockholders may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. The Selling Stockholders may use one or more of the following methods when disposing of the shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers, dealers or underwriters that may act solely as agents;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended (the “Securities Act”), if available, or Section 4(a) (1) under the Securities Act, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The Selling Stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The Selling Stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus.

Upon being notified in writing by a Selling Stockholder that any particular offer of shares of common stock is made, including that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such Selling Stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a Selling Stockholder that a donee or pledgee intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The Selling Stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

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

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum commission or discount to be received by any member of the Financial Industry Regulatory Authority (FINRA) or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold.

We have advised the Selling Stockholders that they are required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended, during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

The aggregate proceeds to the Selling Stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the Selling Stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act or otherwise.

We have agreed with the Selling Stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (a) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement, (b) the date on which the shares of common stock covered by this prospectus may be sold or transferred by non-affiliates without any volume limitations or pursuant to Rule 144 of the Securities Act or (c) date that is three years after the Closing Date.

EXPERTS

Tokai Pharmaceuticals, Inc.

The financial statements of the Company (formerly known as Tokai Pharmaceuticals, Inc.) incorporated in this prospectus by reference to the Company’s Annual Report on Form 10-K for the year ended December 31, 2016 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Otic Pharma, Ltd.

The audited consolidated financial statements of Otic Pharma, Ltd. and its subsidiary incorporated in this prospectus by reference from the Company’s Definitive Proxy Statement on Schedule 14A, filed on April 7, 2017 (which comprise the balance sheets as of December 31, 2016 and 2015, and the related Statements of Operations, Changes in Shareholders Deficit and Cash Flows for the year and period then ended, and the related notes to the financial statements) have been audited by Brightman, Almagor Zohar & Co., a member of

Deloitte Touche Tohmatsu Limited, as stated in their report incorporated by reference and given upon the authority of said firm as experts in auditing and accounting.

LEGAL MATTERS

Certain legal matters, including the validity of the securities offered pursuant to this registration statement, will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California.

WHERE YOU CAN FIND MORE INFORMATION

We must comply with the informational requirements of the Securities Exchange Act of 1934, as amended, and we are required to file reports and proxy statements and other information with the Securities and Exchange Commission. You may read and copy these reports, proxy statements and other information at the Public Reference Room maintained by the Securities and Exchange Commission at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies at the prescribed rates from the Public Reference Section of the Securities and Exchange Commission at its principal office in Washington, D.C. You may call the Securities and Exchange Commission at 1-800-SEC-0330 for further information about the public reference room. The Securities and Exchange Commission also maintains a website that contains reports, proxy and information statements and other information regarding issuers like us that file electronically with the Securities and Exchange Commission. You may access the Securities and Exchange Commission's web site at <http://www.sec.gov>. We maintain a website at www.novustherapeutics.com. The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The Securities and Exchange Commission allows us to incorporate by reference in this prospectus the information that we file with it. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus. Later information that we file with the Securities and Exchange Commission will automatically update and supersede the information in this prospectus, any supplement and the documents listed below. Our SEC file number is 001-36620. We incorporate by reference the specific documents listed below and any future filings made with the Securities and Exchange Commission under Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended, until all of the shares of common stock and warrant shares covered by this prospectus are sold:

- The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on March 3, 2017; Amendment No. 1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on April 25, 2017;
- The Company's Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2017 filed on May 3, 2017;
- The Company's Definitive Proxy Statement on Schedule 14A, filed on April 7, 2017;
- The Company's Current Reports on Form 8-K filed on February 3, 2017, March 9, 2017, April 28, 2017, May 15, 2017, and May 31, 2017; and
- All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of the original Registration Statement and prior to effectiveness of the registration statement of which this prospectus is a part, provided that all documents "furnished" by the Company to the SEC and not "filed" are not deemed incorporated by reference herein.

We will furnish without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any document incorporated by reference. Requests should be addressed to Investor Relations, 19900 MacArthur Boulevard, Suite 550, Irvine, California 92612 or may be made telephonically at (949) 238-8090.

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with different information. You should not assume that the information contained in this prospectus or the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying prospectus supplement is delivered or securities are sold on a later date.

* * *

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution (1).

The following are the estimated expenses of the distribution of the shares registered hereunder on Form S-3:

Registration Fee—Securities and Exchange Commission	\$ 249.66
Accountants Fees and Expenses	\$15,000.00
Legal Fees and Expenses	\$10,000.00
Miscellaneous	\$ 5,000.00
Total	<u>\$30,249.66</u>

(1) The amounts set forth below, except for the SEC Registration Fee, are estimated.

Item 15. Indemnification of Directors and Officers.

The Company's Certificate of Incorporation provides for the elimination of personal monetary liability of directors to the fullest extent permissible under Delaware law. Delaware law does not permit the elimination or limitation of director monetary liability for: (i) breaches of the director's duty of loyalty to the corporation or its stockholders; (ii) acts or omissions not in good faith or involving intentional misconduct or knowing violations of law; (iii) the payment of unlawful dividends or unlawful stock repurchases or redemptions or (iv) transactions in which the director received an improper personal benefit.

Section 145 of the Delaware General Corporation Law permits a Delaware corporation to indemnify, on certain terms and conditions, 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, by reason of the fact that he is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action. The Certificate of Incorporation and Bylaws of the Company require the Company to indemnify the Company's directors and officers to the fullest extent permitted under Delaware law.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 16. Exhibit Index.

<u>Exhibit No.</u>	<u>Description</u>
4.1	Form of Common Stock Certificate (Incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Registration Statement on Form 8-A, filed by the registrant on June 23, 2017)
4.2	Restated Certificate of Incorporation of Novus Therapeutics, Inc., a Delaware corporation, dated September 22, 2014 (Incorporated by reference to Exhibit 3.1 to the registrant's current report on Form 8-K (File No. 001-36620) filed on September 26, 2014)
4.3	Certificate of Amendment to Certificate of Incorporation of Novus Therapeutics, Inc. (effecting, among other things a reverse stock split), filed with the Secretary of the State of Delaware on May 9, 2017 (Incorporated by reference to Exhibit 3.1 to the registrant's current report on Form 8-K (File No. 001-36620) filed on May 15, 2017)
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- 4.5 Amended and Restated Bylaws of Novus Therapeutics, Inc. (Incorporated by reference to Exhibit 3.4 to Amendment No. 1 to the Registration Statement on Form 8-A, filed by the registrant on June 23, 2017)
 - 5.1 Opinion of Gibson, Dunn & Crutcher LLP **
 - 23.1 Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm**
 - 23.2 Consent of Brightman, Almagor Zohar & Co., a member of Deloitte Touche Tohmatsu Limited, the independent auditors of Otic Pharma, Ltd. and its subsidiary**
 - 23.3 Consent of Gibson, Dunn & Crutcher LLP (included in legal opinion filed as Exhibit 5.1)**
 - 24.1 Power of Attorney (included on signature page)**

** Filed herewith.

Item 17. Undertakings.

Item 512(a) of Regulation S-K. 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 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, That:

Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the 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:

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

Item 512(b) of Regulation S-K. 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, as amended (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Item 512(h) of Regulation S-K. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

Item 512(i) of Regulation S-K. The undersigned registrant hereby undertakes that:

- (i) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (ii) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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.

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 Irvine, state of California, on June 23, 2017.

NOVUS THERAPEUTICS, INC.

By: /s/ Gregory J. Flesher
Gregory J. Flesher
Chief Executive Officer

POWER OF ATTORNEY

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, each of whom also constitutes and appoints Gregory J. Flesher and Christine G. Ocampo, and each of them singly, his or her true and lawful attorney-in-fact and agent, for him or her, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Registration Statement, and to file the same and all exhibits thereto and any other documents in connection therewith with the Securities and Exchange Commission, granting unto each attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each attorney-in-fact and agent or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gregory J. Flesher</u> Gregory J. Flesher	Chief Executive Officer and President and Director (Principal Executive Officer)	June 23, 2017
<u>/s/ Christine G. Ocampo</u> Christine G. Ocampo	Chief Financial and Compliance Officer (Principal Financial Officer and Principal Accounting Officer)	June 23, 2017
<u>/s/ Keith A. Katkin</u> Keith A. Katkin	Director, Chairman of the Board of Directors	June 23, 2017
<u>/s/ Gary A. Lyons</u> Gary A. Lyons	Director	June 23, 2017
<u>/s/ Erez Chimovits</u> Erez Chimovits	Director	June 23, 2017
<u>/s/ Cheryl L. Cohen</u> Cheryl L. Cohen	Director	June 23, 2017
<u>/s/ Jodie P. Morrison</u> Jodie P. Morrison	Director	June 23, 2017
<u>/s/ John S. McBride</u> John S. McBride	Director	June 23, 2017

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
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24.1	Power of Attorney (included on signature page)**

** Filed herewith.

[Letterhead of Gibson, Dunn & Crutcher LLP]

June 23, 2017

Novus Therapeutics, Inc.
19900 MacArthur Blvd., Suite 550
Irvine, CA 92612

Re: *Novus Therapeutics, Inc.*
Registration Statement on Form S-3

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-3 (the "Registration Statement") of Novus Therapeutics, Inc., a Delaware corporation (the "Company"), filed with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), in connection with the registration by the Company for resale from time to time by the selling stockholders named in the Registration Statement of up to 400,398 shares of the Company's common stock, par value \$0.001 per share, (the "Shares").

In arriving at the opinion expressed below, we have examined originals, or copies certified or otherwise identified to our satisfaction as being true and complete copies of the originals, of the specimen Common Stock certificate and such other documents, corporate records, certificates of officers of the Company and of public officials and other instruments as we have deemed necessary or advisable to enable us to render the opinions set forth below. In our examination, we have assumed without independent investigation the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies.

Based upon the foregoing, and subject to the assumptions, exceptions, qualifications and limitations set forth herein, we are of the opinion that the Shares are validly issued, fully paid and non-assessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement, and we further consent to the use of our name under the caption "Legal Matters" in the Registration Statement and the prospectus that forms a part thereof. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations of the Commission.

Very truly yours,

/S/ GIBSON, DUNN & CRUTCHER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference, in this Registration Statement on Form S-3 of our report dated March 3, 2017 relating to the financial statements, which appears in Tokai Pharmaceuticals, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts

June 23, 2017

CONSENT OF INDEPENDENT AUDITOR

We hereby consent to the incorporation by reference, in this Registration Statement on Form S-3 of our report dated February 28, 2017, with respect to the consolidated financial statements of Otic Pharma Ltd. appearing in the Company's Definitive Proxy Statement on Schedule 14A, filed on April 7, 2017, and to the reference of our Firm under the caption "Experts" in the Registration Statement.

/s/ Brightman, Almagor Zohar & Co.

Brightman, Almagor Zohar & Co.
Certified Public Accountants
Member of Deloitte Touche Tohmatsu Limited

Tel Aviv, Israel
June 23, 2017