

**SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

**Amendment No. 5**  
to  
**FORM S-1**  
**REGISTRATION STATEMENT**  
**UNDER**  
**THE SECURITIES ACT OF 1933**

**INOTEK PHARMACEUTICALS CORPORATION**

(Exact Name of Registrant as Specified in Its Charter)

Delaware  
(State or Other Jurisdiction of  
Incorporation or Organization)

2834  
(Primary Standard Industrial  
Classification Code Number)

04-3475813  
(I.R.S. Employer  
Identification Number)

131 Hartwell Avenue, Suite 105  
Lexington, MA 02421  
(781) 676-2100

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

David P. Southwell  
President and Chief Executive Officer  
131 Hartwell Avenue, Suite 105  
Lexington, MA 02421  
(781) 676-2100

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

**Copies to:**

Mitchell S. Bloom  
Edwin M. O'Connor  
James P.C. Barri  
Goodwin Procter LLP  
Exchange Place  
53 State Street  
Boston, MA 02109  
(617) 570-1000

Mark B. Weeks  
Babak Yaghmaie  
Divakar Gupta  
Cooley LLP  
1114 Avenue of the Americas  
New York, NY 10036  
(212) 479-6000

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box.

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer (Do not check if a smaller reporting company) Smaller Reporting Company **CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(5)
Common Stock, par value \$0.01 per share	\$46,002,300(2)	\$5,345.47
Convertible Senior Notes(3)	\$23,000,000(4)	\$2,672.60
<b>Total</b>	<b>\$69,002,300</b>	<b>\$8,018.07</b>

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.

(2) Includes the offering price of shares that the underwriters have the option to purchase to cover overallocments, if any.

(3) In accordance with Rule 457(i) under the Securities Act, this registration statement also registers the shares of our common stock that are initially issuable upon conversion of the Convertible Senior Notes due 2020, or the notes, registered hereby. The number of shares of our common stock issuable upon such conversion is subject to adjustment upon the occurrence of certain events described herein and will vary based on the public offering price of the common stock registered hereby. Pursuant to Rule 416 under the Securities Act, the number of shares of our common stock to be registered includes an indeterminate number of shares of common stock that may become issuable upon conversion of the notes as a result of such adjustments.

(4) Equals the aggregate principal amount of the notes to be registered hereunder, including \$3,000,000 aggregate principal amount of the notes that may be offered and sold pursuant to the exercise in full of the underwriters' option to purchase additional notes to cover overallocments, if any.

(5) \$15,367.45 has been previously paid.

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 of 1933 or until this registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Lexington, Commonwealth of Massachusetts, on February 17, 2015.

**INOTEK PHARMACEUTICALS CORPORATION**

By: /s/ David P. Southwell  
Name: David P. Southwell  
Title: President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement and Power of Attorney has been signed by the following person in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ DAVID P. SOUTHWELL</u> David P. Southwell	President, Chief Executive Officer and Director (Principal Executive Officer)	February 17, 2015
* <u>Dale Ritter</u>	Vice President—Finance (Principal Financial and Accounting Officer)	February 17, 2015
* <u>A.N. "Jerry" Karabelas, Ph.D.</u>	Director	February 17, 2015
* <u>Ittai Harel</u>	Director	February 17, 2015
* <u>Paul G. Howes</u>	Director	February 17, 2015
* <u>Devang V. Kantesaria, M.D.</u>	Director	February 17, 2015
* <u>Isai Peimer</u>	Director	February 17, 2015
* <u>Martin Vogelbaum</u>	Director	February 17, 2015

\*Pursuant to Power of Attorney

By: /s/ David P. Southwell  
David P. Southwell

## EXHIBIT INDEX

<b>Exhibit No.</b>	<b>Exhibit Index</b>
1.1**	Form of Underwriting Agreement
1.2**	Form of Underwriting Agreement relating to the Convertible Senior Notes
3.1**	Fifth Amended and Restated Certificate of Incorporation of the Registrant, as amended and currently in effect
3.2**	Form of Seventh Amended and Restated Certificate of Incorporation of the Registrant (to be effective upon the consummation of this offering)
3.3.1**	By-Laws
3.3.2**	Amendment No. 1 to By-Laws
3.3.3**	Amendment No. 2 to By-Laws
3.3.4**	Amendment No. 3 to By-Laws
3.4**	Amended and Restated Bylaws of the Registrant (to be effective upon the consummation of this offering)
4.1**	Form of Common Stock certificate of the Registrant
4.2**	Third Amended and Restated Investor Rights Agreement, dated as of June 9, 2010, by and among the Registrant and each of the parties listed on Schedule A thereto
4.3.1**	Third Amended and Restated Stockholders Agreement, dated as of June 9, 2010, by and among the Registrant and each of the parties listed on Schedule I thereto, as amended and currently in effect
4.3.2**	Amendment No. 1 to the Third Amended and Restated Stockholders Agreement, dated as of June 11, 2010, by and among the Registrant and each of the parties listed on the signature pages thereto
4.4**	Form of Indenture between Inotek Pharmaceuticals Corporation, and Wilmington Trust, National Association, as the trustee, relating to the % Convertible Senior Notes due 2020
5.1.1	Opinion of Goodwin Procter LLP related to the Offering of Common Stock
5.1.2	Opinion of Goodwin Procter LLP related to the Offering of % Convertible Senior Notes due 2020
10.1†**	2004 Stock Option and Incentive Plan
10.2†**	2014 Stock Option and Incentive Plan and forms of agreements thereunder, as amended
10.3†**	Letter Agreement, dated as of July 28, 2014, by and between the Registrant and David P. Southwell
10.4†**	Letter Agreement, dated as of May 2, 2007, by and between the Registrant and Dr. Rudolf A. Baumgartner, M.D., as amended and currently in effect
10.5†**	Letter Agreement, dated as of August 23, 2007, by and between the Registrant and Dr. William K. McVicar, Ph.D., as amended and currently in effect
10.6†**	Letter Agreement, dated as of August 28, 2014, by and between the Registrant and Dale Ritter
10.7**	Venture Loan and Security Agreement, dated as of June 28, 2013, by and among the Registrant, Horizon Technology Finance Corporation and Fortress Credit Co LLC
10.8.1†**	Form of Indemnification Agreement, to be entered into between the Registrant and its directors
10.8.2†**	Form of Indemnification Agreement, to be entered into between the Registrant and its officers
10.9**	Lease, dated as of May 11, 2012, by and between the Registrant and Farley White Kilbrook Three, LLC, as amended and currently in effect

**Exhibit  
No.**

**Exhibit Index**

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10.10**	Inotek Pharmaceuticals Corporation 2014 Employee Stock Purchase Plan, dated as of November 18, 2014
23.1	Consent of McGladrey LLP
23.2	Consent of Goodwin Procter LLP (included in Exhibit 5.1)
24.1**	Power of Attorney (included in signature page)
25.1**	Statement of Eligibility of Trustee on Form T-1

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\*\* Previously filed.

† Indicates a management contract or any compensatory plan, contract or arrangement.

February 17, 2015

Inotek Pharmaceuticals Corporation  
131 Hartwell Avenue, Suite 105  
Lexington, MA 02421

Re: Securities Registered under Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-1 (File No. 333-199859) (as amended or supplemented, the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offering by Inotek Pharmaceuticals Corporation, a Delaware corporation (the "Company") of up to 7,667,050 shares (the "Shares") of the Company's Common Stock, \$0.01 par value per share, including Shares purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law (which includes reported judicial decisions interpreting the Delaware General Corporation Law).

Based on the foregoing, we are of the opinion that the Company Shares have been duly authorized and, when the price and other terms upon which the Company Shares are to be sold have been approved by the Board of Directors of the Company (or a duly authorized committee of the Board of Directors) and the Company Shares have been issued and delivered against payment in accordance with such terms, the Company Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/S/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

February 17, 2015

Inotek Pharmaceuticals Corporation  
131 Hartwell Avenue, Suite 105  
Lexington, MA 02421

Re: Securities Registered under Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-1 (File No. 333-199859) (as amended or supplemented, the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offering by Inotek Pharmaceuticals Corporation, a Delaware corporation (the "Company") of up to \$34,500,000 aggregate principal amount of convertible senior notes (the "Notes") and the shares of the Company's Common Stock, \$0.01 par value per share (the "Common Stock"), that may be issued upon conversion of the Notes (the "Conversion Shares" and together with the Notes, the "Securities"). The Securities are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement"), and will be issued under an indenture (the "Indenture"), between the Company and Wilmington Trust, National Association, as trustee (the "Trustee"), the form of which has been filed with the Securities and Exchange Commission as an exhibit to the Registration Statement.

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company. For purposes of our opinions below, we have assumed that the Indenture has been duly authorized by the Trustee.

The opinion set forth below is limited to the Delaware General Corporation Law (which includes reported judicial decisions interpreting the Delaware General Corporation Law) and the law of New York.

Based on the foregoing, and subject to the additional qualifications set forth below, we are of the opinion that:

1. The Notes have been duly authorized and, when the price and other terms upon which the Notes are to be sold have been approved by the Board of Directors of the Company (or a duly authorized committee of the Board of Directors) and upon the due execution and delivery of the Indenture reflecting such terms by each of the Company and the Trustee and the execution, authentication and

issuance of the Notes (in the form examined by us) against payment therefor in accordance with the terms of the Underwriting Agreement and otherwise in accordance with the Indenture, the Notes will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

2. The issuance of the Conversion Shares has been duly authorized and, when the conversion rate and other terms related to the conversion of the Notes have been approved by the Board of Directors of the Company (or a duly authorized committee of the Board of Directors) and assuming a sufficient number of authorized but unissued shares of Common Stock are available for issuance when the Notes are converted, the Conversion Shares, when issued and delivered upon conversion of the Notes in accordance with the Indenture, will be validly issued, fully paid and nonassessable.

The opinion expressed in numbered opinion paragraph 1 above is subject to and limited by the effect of any applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith, fair dealing and unconscionability), regardless of whether considered in a proceeding in equity or law.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/S/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the use in this Amendment No. 5 to the Registration Statement (No. 333-199859) on Form S-1/A of Inotek Pharmaceuticals Corporation of our report dated August 29, 2014, except for the effects of the November 2014 reverse stock split described in Note 11, as to which the date is November 26, 2014, and the January 2015 reverse stock split described in Note 11, as to which the date is January 21, 2015, relating to our audits of the consolidated financial statements, appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to our firm under the caption "Experts" in such Prospectus.

/s/ McGladrey LLP

Boston, Massachusetts  
February 17, 2015