

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

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

VENTRUS BIOSCIENCES, INC.

(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)*

20-8729264

*(I. R. S. Employer
Identification No.)*

**787 7th Avenue, 48th Floor
New York, New York 10019
(212) 554-4300**

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

**Russell H. Ellison, M.D.
Chief Executive Officer
Ventrus Biosciences, Inc.
787 7th Avenue, 48th Floor
New York, New York 10019
(212) 554-4300**

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

Copies to:

**Alexander M. Donaldson, Esq.
W. David Mannheim, Esq.
Wyrick Robbins Yates & Ponton LLP
4101 Lake Boone Trail, Suite 300
Raleigh, North Carolina 27607
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**Steven D. Uslander, Esq.
Mark F. Coldwell, Esq.
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Approximate date of commencement of proposed sale to the public: As promptly as practicable after this registration statement becomes effective.

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, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-168224

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 smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price (1)	Amount of registration fee
Common stock, \$0.001 par value per share (2)	115,000	\$6.00	\$690,000	\$49.20
Shares of common stock underlying underwriter's common stock purchase warrant	6,800	\$7.50	\$51,000	\$3.64
Total			\$741,000	\$52.84

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Includes 15,000 shares of common stock that may be issued pursuant to the exercise of a 45-day option granted by the registrant to the underwriter cover over-allotments, if any.

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

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

The Registrant is filing this Registration Statement on Form S-1 pursuant to Rule 462(b) under the Securities Act of 1933, as amended, to increase the amount of securities available for sale under its previously filed Registration Statement on Form S-1 (No. 333-168224, filed on July 20, 2010 and declared effective on December 15, 2010) by 121,800 shares, which represents 3.6% of the 3,410,400 shares registered under such previously filed Registration Statement, the contents of which, including all exhibits thereto, are incorporated herein by reference.

Item 16. Exhibits.

(a) The following exhibits are filed as part of this Registration Statement:

<u>Exhibit Number</u>	<u>Description of Document</u>	<u>Registrant's Form</u>	<u>Dated</u>	<u>Exhibit Number</u>	<u>Filed Herewith</u>
5.1	Opinion of Wyrick Robbins Yates & Ponton LLP.				X
23.1	Consent of J. H. Cohn LLP.				X
23.3	Consent of Wyrick Robbins Yates & Ponton LLP (included as part of Exhibit 5.1).				X
24.1	Power of Attorney (included in the signature pages hereto).				X

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant 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 December 16, 2010.

VENTRUS BIOSCIENCES, INC.

Date: December 16, 2010

By: /s/ Russell H. Ellison

Name: Russell H. Ellison

Title: Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that the persons whose signatures appear below each severally constitutes and appoints Russell H. Ellison and David J. Barrett, and each of them, his true and lawful attorney-in-fact and agent, with full powers of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including pre-effective and post-effective amendments) to this registration statement, and to file the same, with all exhibits, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all which said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do, or cause to be done by virtue hereof.

SIGNATURES

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.

Signature	Title	Date
<u>/s/ Russell H. Ellison</u> Russell H. Ellison	Chief Executive Officer (Principal Executive Officer) and Director	December 16, 2010
<u>/s/ David J. Barrett</u> David J. Barrett	Chief Financial Officer (Principal Financial and Accounting Officer)	December 16, 2010
<u>/s/ Mark Auerbach</u> Mark Auerbach	Director	December 16, 2010
<u>/s/ Joseph Felder</u> Joseph Felder	Director	December 16, 2010
<u>/s/ Myron Z. Holubiak</u> Myron Z. Holubiak	Director	December 16, 2010
<u>/s/ Thomas Rowland</u> Thomas Rowland	Director	December 16, 2010

Wyrick Robbins Yates & Ponton LLP
4101 Lake Boone Trail, Suite 300
Raleigh, North Carolina 27607

December 17, 2010

Board of Directors
Ventrus Biosciences, Inc.
787 Seventh Avenue
48th Floor
New York, New York 10019

Ventrus Biosciences, Inc.
Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Ventrus Biosciences, Inc., a Delaware corporation (the "Company"), in connection with the Company's filing of a Registration Statement on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Act"). The Registration Statement relates to the sale by the Company in an underwritten public offering of shares (including shares subject to the underwriters' over-allotment option) (the "Shares") of the Company's common stock, \$0.001 par value per share (the "Common Stock"). The Registration Statement also relates to shares of Common Stock to be issued pursuant to the exercise of a warrant to be issued by the Company (the "Warrant Shares") to the underwriters who are signatories to the underwriting agreement (the "Underwriting Agreement") among the Company and the several underwriters named therein.

We understand that the Shares are to be sold by the Company pursuant to the terms of the Underwriting Agreement. We understand that the Warrant Shares are to be sold by the Company pursuant to the terms of a Warrant (the "Warrant") in substantially the form attached as an exhibit to the Underwriting Agreement.

This opinion is being furnished in accordance with the requirements of Item 16 of Form S-1 and Item 601(b)(5)(i) of Regulation S-K.

In connection with the foregoing, we have relied upon, among other things, our examination of such documents, records of the Company and certificates of its officers and public officials as we deemed necessary for purposes of the opinions expressed below. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the original of all documents submitted to us as copies thereof.

Based upon the foregoing, we are of the opinion that:

1. The Shares have been duly authorized for issuance and, when the Shares have been issued and sold in accordance with the terms and provisions of the Underwriting Agreement and as described in the Registration Statement, will be legally and validly issued, fully paid and nonassessable.
 2. The Warrant has been duly authorized for issuance and, when the Warrant has been issued and delivered as contemplated pursuant to the Underwriting Agreement, the Warrant will be the valid binding obligation of the Company, enforceable against the Company in accordance with its terms, except to the extent that enforcement thereof may be limited by (a) bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other similar laws now or hereafter in effect relating to creditors' rights generally and (b) general principles of equity (regardless of whether enforceability is considered in a proceeding at law or in equity).
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3. The Warrant Shares have been duly authorized for issuance and, when the Warrant Shares have been issued and sold in accordance with the terms and provisions of the Warrant, and upon receipt by the Company of the consideration to be paid therefor, the Warrant Shares will be legally and validly issued, fully paid and nonassessable.

This opinion is limited to the Delaware General Corporation Law, including the statutory provisions of the Delaware General Corporation Law and all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws, and, as to the Warrant constituting a valid binding obligation of the Company, the Business Corporation Law of the State of New York. We hereby consent to the filing of this opinion with the Commission as Exhibit 5.1 to the Registration Statement and reference to our firm under the heading "Legal Matters" in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission.

Very truly yours,

/s/ Wyrick Robbins Yates & Ponton LLP

**Consent of Independent Registered
Public Accounting Firm**

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report on our audits of the financial statements of Ventrus Biosciences, Inc. as of December 31, 2009 and 2008 and for the years then ended and for the period from October 7, 2005 (inception) to December 31, 2009 which includes an explanatory paragraph relating to Ventrus Biosciences, Inc.'s ability to continue as a going concern, dated July 19, 2010, except for the effects of the matter discussed in the last paragraph of Note 1 which are as of November 10, 2010, which report is included in Ventrus Biosciences, Inc.'s Registration Statement on Form S-1 (File No. 333-168224), which was declared effective on December 15, 2010. We also consent to the reference to our Firm under the caption "Experts" in the Registration Statement on Form S-1 (File No. 333-168224), which was declared effective on December 15, 2010, and its incorporation by reference in this Registration Statement.

/s/ J. H. Cohn LLP

Roseland, New Jersey
December 10, 2010
