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

Washington, D.C. 20549

FORM S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

TRANSENTERIX, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization) 11-2962080 (I.R.S. Employer Identification Number)

635 Davis Drive, Suite 300 Morrisville, NC 27560 (919) 765-8400

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

Joseph P. Slattery EVP and Chief Financial Officer 635 Davis Drive, Suite 300 Morrisville, NC 27560 (919) 765-8400 (Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

With a copy to:

Mary J. Mullany, Esquire Ballard Spahr LLP 1735 Market Street, 51st Floor Philadelphia, PA 19103 (215) 864-8631

Approximate date of commencement of proposed sale to the public: As soon as practicable 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. \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. 🖾 333-199998

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. \Box

If this form is a registration statement filed 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. \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. \Box

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 definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act (Check one): Large Accelerated Filer □ Non-Accelerated Filer □

 Accelerated Filer
 ⊠

 Smaller Reporting Company
 □

Emerging Growth Company \Box

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

CALCULATION OF REGISTRATION FEE

d Mental Amount of Registration Fee (2)
\$1,327.64
55,0

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

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. TransEnterix, Inc. previously registered an aggregate principal amount of \$150,000,000 of the Company's securities on the Registration Statement on Form S-3 (Registration No. 333-199998), as amended (the "Related Registration Statement") and paid a fee of \$15,105. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of no more than 20% of the maximum aggregate offering price of the remaining securities eligible to be sold under the Related Registration Statement is hereby registered.

THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE UPON FILING WITH THE COMMISSION IN ACCORDANCE WITH RULE 462(B) OF THE SECURITIES ACT OF 1933, AS AMENDED.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

TransEnterix, Inc. (the "Company") is filing this registration statement with the Securities and Exchange Commission, or SEC, pursuant to Rule 462(b) under the Securities Act of 1933, as amended,. This registration statement relates to the public offering of securities contemplated by the registration statement on Form S-3 (File No. 333-199998), which was originally filed with the SEC on November 7, 2014 and declared effective on December 19, 2014, and post-effectively amended pursuant to Post-Effective Amendment No. 1 on Form S-3, filed with the SEC on March 8, 2016 and declared effective on June 22, 2016 (the "Registration Statement").

We are filing this registration statement for the purpose registering additional securities of the Company with an aggregate offering price not to exceed \$11,455,083. The information set forth in the Registration Statement, including all exhibits thereto and all information incorporated by reference therein, is incorporated by reference in this filing.

The required opinions and consents are listed on the exhibit index and filed with this filing.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Morrisville, State of North Carolina on the 28 day of April, 2017.

TransEnterix, Inc.

B١	<i>V</i> :	/s/	Todd	M.	Pope

Todd M. Pope President and Chief Executive Officer (principal executive officer)

By: /s/ Joseph P. Slattery

Joseph P. Slattery Executive Vice President and Chief Financial Officer (principal financial officer and principal accounting officer)

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

Signature	Title	Date
/s/ Todd M. Pope Todd M. Pope	President, Chief Executive Officer and Director (principal executive officer)	April 28, 2017
/s/ Joseph P. Slattery Joseph P. Slattery	Executive Vice President and Chief Financial Officer (principal financial officer and principal accounting officer)	April 28, 2017
* Paul A. LaViolette	Chairman of the Board and a Director	April 28, 2017
* Andrea Biffi	Director	April 28, 2017
* Jane H. Hsiao, Ph.D.	Director	April 28, 2017
* William N. Kelley, M.D.	Director	April 28, 2017

Signature	Title	Date
	Director	April 28, 2017
Aftab R. Kherani		
	Director	April 28, 2017
David B. Milne		
	Director	April 28, 2017
ichard C. Pfenniger, Jr.		
	Director	April 28, 2017
Villiam N. Starling, Jr.		

Joseph P. Slattery Attorney-in-fact

EXHIBIT INDEX

Exhibit <u>Number</u>	Description
5.1	Opinion of Ballard Spahr LLP.
23.1	Consent of BDO USA, LLP.
23.2	Consent of Ballard Spahr LLP (included in Exhibit 5.1).
24.1*	Power of Attorney.

* Previously filed with TransEnterix, Inc.'s Registration Statement on Form S-3 (File No. 333-199998) originally filed on November 7, 2014.

Ballard Spahr

1735 Market Street, 51st Floor Philadelphia, PA 19103-7599 TEL 215.665.8500 FAX 215.864.8999 www.ballardspahr.com

April 28, 2017

TransEnterix, Inc. 635 Davis Drive, Suite 300 Morrisville, NC 27560

Re: TransEnterix, Inc.

Ladies and Gentlemen:

We have acted as counsel to TransEnterix, Inc., a Delaware corporation (the "Company"), and are rendering this opinion in connection with the filing of a registration statement under Rule 462 of the Securities Act of 1933, as amended (the "Securities Act") (the "Rule 462 Registration Statement"), related to a registration statement on Form S-3 (File No. 333-199998) filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act, on November 7, 2014 and declared effective on December 19, 2014, and post-effectively amended pursuant to Post-Effective Amendment No. 1 on Form S-3, as filed with the SEC on March 8, 2016 and declared effective on June 22, 2016 (the "Related Registration Statement"). The Rule 462 Registration Statement is being filed by the Company with the Commission, under the Securities Act, for the registration of shares of the Company's common stock, par value \$0.001 per share (the "Common Stock"), Series A warrants to purchase one share of Common Stock (the "Series A Warrants"), shares of Common Stock underlying the Series A Warrants, Series B warrants to purchase 0.75 shares of Common Stock (the "Series B Warrants," and together with the Series A Warrants, the "Warrants") and shares of Common Stock underlying the Series B Warrants, with a proposed maximum aggregate offering price of \$11,455,083.

In connection with the filing of a prospectus supplement (the "Prospectus Supplement"), the Company will offer and sell units (the "Units") consisting of one share of Common Stock, one Series A Warrant, and one Series B Warrant. The Units, the shares of Common Stock underlying the Units (the "Shares"), the Warrants, and the shares of Common Stock underlying the Warrants (the "Warrant Shares") are collectively referred to as the "Securities." The Securities are to be sold by the Company pursuant to an Underwriting Agreement (the "Agreement") entered into by and between the Company and Stifel Nicolaus & Company, Incorporated.

We have examined originals or copies, certified or otherwise identified to our satisfaction, of (i) the Rule 462 Registration Statement, (ii) the Related Registration Statement and all exhibits thereto, (iii) the Prospectus Supplement, (iv) the Agreement, (v) the forms of the Warrants, (vi) the Amended and Restated Certificate of Incorporation of the Company together with all amendments thereto, (vii) the Amended and Restated Bylaws of the Company and the Pricing Committee of the Board of Directors of the Company. We have also examined such corporate records and other agreements, documents and instruments, and such certificates or comparable documents of public officials and officers and representatives of the Company, and have made such inquiries of such officers and representatives and have considered such matters of law as we have deemed appropriate as the basis for the opinions hereinafter set forth.

 $\label{eq:alpha} \begin{array}{l} Atlanta \mid Baltimore \mid Bethesda \mid Delaware \mid Denver \mid Las Vegas \mid Los Angeles \mid New Jersey \mid New York \mid Philadelphia \mid Phoenix Salt Lake City \mid San Diego \mid Washington, DC \mid www.ballardspahr.com \\ \end{array}$

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In delivering this opinion, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified, photostatic or conformed copies, the authenticity of originals of all such latter documents, and the accuracy and completeness of all records, information and statements submitted to us by officers and representatives of the Company. In making our examination of documents executed by parties other than the Company, we have assumed that such parties had the power, corporate or other, to enter into and perform all obligations thereunder and have also assumed the due authorization of all requisite action, corporate or other, and execution and delivery by such parties of such documents and the validity and binding effect thereof with respect to such parties.

Based upon and subject to the limitations, qualifications and assumptions set forth herein, we are of the opinion that, with respect to the offering of the Securities by the Company pursuant to the Rule 462 Registration Statement, when the Rule 462 Registration Statement has become effective under the Securities Act: (i) the Shares to be issued and sold by the Company have been duly authorized for issuance and, when issued and paid for in accordance with the terms and conditions of the Agreement, will be validly issued, fully paid and non-assessable; (ii) the Warrants to be issued and sold by the Company have been duly authorized for issuance with the terms and conditions of the Warrants, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms; and (iii) the Warrant Shares issuable upon exercise of the Warrants have been duly authorized and reserved for issuance and, when issued and sold by the Company in accordance with the Warrants, will be validly issued, fully paid and non-assessable.

The opinions expressed herein are subject to the effect of applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, fraudulent transfer, marshalling or similar laws affecting creditors' rights and remedies generally; general principles of equity, including without limitation, concepts of materiality, reasonableness, good faith and fair dealing (regardless of whether such enforceability is considered in a proceeding in equity or at law); and limitations on enforceability of rights to indemnification or contribution by federal or state securities laws or regulations or by public policy.

We express no opinion as to the laws of any jurisdiction other than the present federal laws of the United States of America, the present laws of the State of Delaware and the present laws of the State of New York.

TransEnterix, Inc. <April 28, 2017> Page 3

We hereby consent to the sole use of this opinion as an exhibit to the Rule 462 Registration Statement and to the use of our name under the heading "Legal Matters" in the prospectus included therein. 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 and the rules and regulations promulgated thereunder.

Very truly yours,

/s/ Ballard Spahr LLP

Consent of Independent Registered Public Accounting Firm

TransEnterix, Inc. Morrisville, North Carolina

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, of our reports dated March 6, 2017, relating to the consolidated financial statements and the effectiveness of TransEnterix, Inc.'s internal control over financial reporting appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2016. Our report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus incorporated by reference into such Registration Statement.

/s/ BDO USA, LLP

Raleigh, North Carolina April 28, 2017