

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

Amendment No. 1
to
Form S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ENTEROMEDICS INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

48-1293684
(I.R.S. Employer
Identification No.)

2800 Patton Road
St. Paul, Minnesota 55113
(651) 634-3003
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Dan W. Gladney
President and Chief Executive Officer
2800 Patton Road
St. Paul, Minnesota 55113
(651) 634-3003
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

Bruce A. Machmeier
Brett R. Hanson
Fox Rothschild LLP
222 South Ninth Street, Suite 2000
Minneapolis, Minnesota 55402
(612) 607-7000

Approximate date of commencement of proposed sale to the public: From time to time 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. o

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. x

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. o

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. o

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. o

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. o

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 x
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. o

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

This Amendment No. 1 to the Registration Statement on Form S-3 of EnteroMedics Inc. (File No. 333-216600) is being filed solely to file an updated consent of Deloitte & Touche LLP, the company's independent registered public accounting firm. Accordingly, this Amendment No. 1 consists solely of the facing page, this explanatory note, Item 16 of Part II of the Registration Statement, the signatures, and the exhibit index, and is not intended to amend or delete any part of the Registration Statement or prospectus included therein except as specifically noted herein.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 16. List of Exhibits

The exhibits filed with this registration statement are set forth on the exhibit index following the signature page and are incorporated by reference in their entirety into this item.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Paul, State of Minnesota, on July 18, 2017.

ENTEROMEDICS INC.

By: /s/ Dan W. Gladney
Dan W. Gladney
President and Chief Executive Officer

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 date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Dan W. Gladney</u> Dan W. Gladney	President and Chief Executive Officer, Chairman and Director (principal executive officer)	July 18, 2017
<u>/s/ Scott P. Youngstrom</u> Scott P. Youngstrom	Chief Financial Officer and Chief Compliance Officer (principal financial and accounting officer)	July 18, 2017
<u>*</u> Gary D. Blackford	Director	July 18, 2017
<u>*</u> Carl Goldfischer, M.D.	Director	July 18, 2017
<u>*</u> Bobby I. Griffin	Director	July 18, 2017
<u>*</u> Lori S. McDougal	Director	July 18, 2017
<u>*</u> Nicholas L. Teti, Jr.	Director	July 18, 2017
<u>*</u> Jon T. Tremmel	Director	July 18, 2017
By: <u>/s/ Dan W. Gladney</u> Dan W. Gladney Attorney-in-Fact		

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
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1.1*	Form of Underwriting Agreement.
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- 3.1 Sixth Amended and Restated Certificate of Incorporation of the Company. (Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on December 28, 2016 (File No. 1-33818)).
- 3.2 Form of Certificate of Designation of Series A Preferred Stock. (Incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 filed on January 11, 2017 (File No. 333-213704)).
- 3.3 Amended and Restated Bylaws of the Company, as currently in effect. (Incorporated herein by reference to Exhibit 3.4 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed on July 6, 2007 (File No. 333-143265)).
- 4.1 Form of Common Stock Certificate. (Incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1, as amended, filed with the Securities and Exchange Commission on August 14, 2007 (File No. 333-143265)).
- 4.2* Form of Certificate of Designation of Preferred Stock.
- 4.3* Form of Securities Warrant Agreement.
- 4.4* Form of Unit Agreement.
- 5.1** Opinion of Dorsey & Whitney LLP.
- 23.1*** Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.
- 23.2** Consent of Dorsey & Whitney LLP (included in Exhibit 5.1 to this registration statement).
- 24.1** Power of Attorney (included on signature page to the Company's Registration Statement on Form S-3 filed with the Securities and Exchange Commission on March 10, 2017 (File No. 333-216600)).

* To be filed by amendment or by a report filed under the Securities Exchange Act of 1934, as amended, and incorporated by reference herein.

** Previously filed with the Registration Statement on Form S-3 (File No. 333-216600) filed with the Securities and Exchange Commission on March 10, 2017.

*** Filed herewith.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Amendment No. 1 to Registration Statement No. 333-216600 on Form S-3 of our report dated March 8, 2017, relating to the consolidated financial statements of EnteroMedics Inc. and subsidiary, appearing in the Annual Report on Form 10-K of EnteroMedics Inc. for the year ended December 31, 2016, and to the reference to us under the heading "Experts" in the Prospectus, which is part of such Registration Statement.

/s/ Deloitte & Touche LLP

Minneapolis, Minnesota

July 18, 2017
