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

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**FORM S-8**  
**REGISTRATION STATEMENT**  
*UNDER*  
**THE SECURITIES ACT OF 1933**

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

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

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

**2800 Patton Road**  
**St. Paul, MN 55113**  
(Address, including zip code, of registrant's principal executive offices)

**Individual Stock Option Agreement**  
(Full title of the plan)

**Greg S. Lea**  
**Chief Financial Officer,**  
**Chief Compliance Officer and Secretary**  
**EnteroMedics Inc.**  
**2800 Patton Road**  
**St. Paul, MN 55113**  
**(651) 634-3003**  
(Name, address and telephone number, including area code, of agent for service)

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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 Securities Exchange Act of 1934, as amended.

Large accelerated filer

Accelerated Filer

Non-accelerated filer  (Do not check if a smaller reporting company)

Smaller Reporting Company

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**CALCULATION OF REGISTRATION FEE**

<b>Title of securities to be registered</b>	<b>Amount to be registered (1)</b>	<b>Proposed maximum offering price per share</b>	<b>Proposed maximum aggregate offering price</b>	<b>Amount of registration fee</b>
Common Stock (\$0.01 par value per share)	896,667	\$2.73(2)	\$2,448,032(2)	\$246.52

- (1) The number of shares being registered represents (i) the 516,666 shares to be offered and sold pursuant to the Non-Incentive Stock Option Agreement effective as of October 28, 2015, between EnteroMedics Inc. and Dan W. Gladney (the "Option Agreement") and (ii) the 380,001 shares to be offered and sold pursuant to the Inducement Option Plan effective as of January 18, 2016 (the "Inducement Plan"). Pursuant to Rule 416 under the Securities Act of 1933, as amended, this registration statement also covers any additional shares of EnteroMedics Inc. common stock that may become issuable according to anti-dilution provisions of the Option Agreement and the Inducement Plan.
- (2) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(h)(1) under the Securities Act, based upon the weighted average exercise price at which the stock options may be exercised under the Option Agreement and the Inducement Plan.

## PART II

### INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents by Reference.

The following documents and information, which EnteroMedics Inc. (the "Company") has filed with the Securities and Exchange Commission ("SEC"), are hereby incorporated by reference into this Registration Statement on Form S-8:

1. The Company's Annual Report on Form 10-K for the year ended December 31, 2015;
2. The Company's Quarterly Report on Form 10-Q for the three months ended March 31, 2016;
3. The Company's Current Reports on Form 8-K filed with the SEC on January 8, 2016; January 13, 2016; January 22, 2016; February 3, 2016; May 6, 2016 (excluding Item 2.02); May 10, 2016; and May 13, 2016; and
4. The description of our common shares contained in any registration statement on Form 8-A that we have filed with the SEC, and any amendment or report filed for the purpose of updating this description.

All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), (excluding any portions thereof furnished under Items 2.02 or 7.01 of Form 8-K) subsequent to the date hereof and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities remaining unsold shall be deemed to be incorporated by reference herein and to be a part hereof from the respective dates of filing of such documents.

#### Item 4. Description of Securities.

Not applicable.

#### Item 5. Interests of Named Experts and Counsel.

Not applicable.

#### Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law, as amended, provides that, under certain circumstances, a corporation may indemnify 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 (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at its request in such capacity in 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 the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful.

Article 6 of our Fifth Amended and Restated Certificate of Incorporation, as amended, provides that no director of our company shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except for liability (i) for any breach of the director's duty of loyalty to our company or its stockholders, (ii) for acts or omissions not in good faith or which involved intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit.

Article 8 of our bylaws provides that we will indemnify each person who was or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer of our company or is or was serving at the request of our company as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent (all such persons are referred to as an indemnitee), shall be indemnified and held harmless by our company, against all expenses, liability and loss (including attorneys' fees, judgments, fines, penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if such indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our bylaws provide that we will indemnify any indemnitee seeking indemnity in connection with a proceeding (or part thereof) initiated by such person only if such proceeding (or part thereof) was authorized by our board of directors. We will indemnify the indemnitee for expenses incurred in defending any such proceeding in advance of its final disposition to the extent not prohibited by law. Such indemnification will only be made if the indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Expenses must be advanced to an indemnitee under certain circumstances.

As a condition precedent to the right of indemnification, an indemnitee must give us notice of the action for which indemnity is sought and we have the right to participate in such action or assume the defense thereof.

Article 8 of our bylaws further provides that the indemnification provided therein is not exclusive, and provides that no amendment, termination or repeal of the relevant provisions of the Delaware law statute or any other applicable law will diminish the rights of any indemnitee to indemnification under our certificate of incorporation.

We have obtained director and officer insurance providing for indemnification for our directors and officers for certain liabilities and such insurance provides for indemnification of our directors and officers for liabilities under the Securities Act of 1933, as amended (the "Securities Act").

**Item 7. Exemption from Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

<u>Exhibit No.</u>	<u>Description</u>
4.1	Fifth Amended and Restated Certificate of Incorporation of the Company and all amendments thereto. (Incorporated herein by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-3 filed on May 9, 2014 (File No. 333-195855))
4.2	Certificate of Amendment to Fifth Amended and Restated Certificate of Incorporation. (Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on January 8, 2016 (File No. 1-33818)).
4.3	Certificate of Amendment to Fifth Amended and Restated Certificate of Incorporation. (Incorporated herein by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed on January 8, 2016 (File No. 1-33818)).
4.4	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)).

- 4.5 Inducement Option Plan. (Incorporated herein by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on January 22, 2016 (File No. 1-33818)).
- 4.6 Form of Non-Incentive Stock Option Agreement pursuant to the Inducement Option Plan. (Incorporated herein by reference to Exhibit 10.33 to the Company's Annual Report Form 10-K filed on March 28, 2016 (File No. 1-33818)).
- 4.7 Form of Non-Incentive Stock Option Agreement for non-plan executive inducement option grants. (Incorporated herein by reference to Exhibit 10.47 to the Company's Annual Report Form 10-K filed on March 28, 2016 (File No. 1-33818)).
- 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 this Registration Statement).

**Item 9. Undertakings.**

(a) 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;

(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) (§230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than 20% 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) and (a)(1)(ii) above 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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) 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.

(c) Insofar as indemnification for liabilities arising under the Securities Act 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 SEC such indemnification is against public policy as expressed in the Securities 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 Securities Act and will be governed by the final adjudication of such issue.

## 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-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of St. Paul, State of Minnesota, on the 9th day of June, 2016.

### ENTEROMEDICS INC.

By: /s/ Greg S. Lea  
Greg S. Lea  
Chief Financial Officer and Chief Compliance Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Dan W. Gladney and Greg S. Lea, and each of them, his true and lawful attorneys-in-fact and agents, each acting alone, with the powers of substitution and revocation, for him and in his name, place and stead, in any and all capacities, to sign a Registration Statement on Form S-8, and any and all amendments (including post-effective amendments) thereto, relating to the issuance of shares of common stock of EnteroMedics Inc. pursuant to the Non-Incentive Stock Option Agreement effective as of October 28, 2015, between EnteroMedics Inc. and Dan W. Gladney and the Inducement Option Plan effective as of January 18, 2016 and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or 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 that all such attorneys-in-fact and agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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	Chief Executive Officer and Director (principal executive officer)	June 6, 2016
<u>/s/ Greg S. Lea</u> Greg S. Lea	Chief Financial Officer and Chief Compliance Officer (principal financial and accounting officer)	June 6, 2016
<u>/s/ Mark B. Knudson, Ph.D.</u> Mark B. Knudson, Ph.D.	Chairman of the Board	June 9, 2016
<u>/s/ Carl Goldfischer, M.D.</u> Carl Goldfischer, M.D.	Director	June 6, 2016
<u>/s/ Bobby I. Griffin</u> Bobby I. Griffin	Director	June 6, 2016

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<u>/s/ Anthony P. Jansz</u> Anthony P. Jansz	Director	June 9, 2016
<u>/s/ Lori C. McDougal</u> Lori C. McDougal	Director	June 7, 2016
<u>/s/ Nicholas L. Teti, Jr.</u> Nicholas L. Teti, Jr.	Director	June 6, 2016
<u>/s/ Jon T. Tremmel</u> Jon T. Tremmel	Director	June 9, 2016



## EXHIBIT INDEX

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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 this Registration Statement).

[Letterhead of Dorsey & Whitney LLP]

June 9, 2016

EnteroMedics Inc.  
2800 Patton Road  
St. Paul, MN 55113

Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to EnteroMedics Inc., a Delaware corporation (the "Company"), in connection with the registration under the Securities Act of 1933, as amended, on a registration statement on Form S-8 (the "Registration Statement") of (i) the 516,666 shares to be offered and sold pursuant to the Non-Incentive Stock Option Agreement (the "Option Agreement") effective as of October 28, 2015, between EnteroMedics Inc. and Dan W. Gladney and (ii) the 380,001 shares to be offered and sold pursuant to the Inducement Option Plan (the "Inducement Plan") effective as of January 18, 2016 (collectively, the "Shares").

We have examined such documents and have reviewed such questions of law as we have considered necessary and appropriate for the purposes of this opinion. In rendering our opinion set forth below, we have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures and the conformity to authentic originals of all documents submitted to us as copies. We have also assumed the legal capacity for all purposes relevant hereto of all natural persons. As to questions of fact material to our opinion, we have relied upon certificates of officers of the Company and of public officials.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance, delivery and payment therefor in accordance with the terms of the Option Agreement and the Inducement Plan will be validly issued, fully paid and nonassessable.

Our opinion expressed above is limited to the Delaware General Corporation Law.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. The foregoing opinion is being furnished to you solely for your benefit and may not be relied upon by, nor may copies be delivered to, any other person without our prior written consent. In giving this consent, we do not 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 thereunder.

Very truly yours,

/s/ Dorsey & Whitney LLP

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 28, 2016, relating to the consolidated financial statements of EnteroMedics Inc. and subsidiary (the "Company"), appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2015.

/s/ Deloitte & Touche LLP

Minneapolis, Minnesota  
June 9, 2016