

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**SCHEDULE 13D**

**Under the Securities Exchange Act of 1934  
(Amendment No. 1)\***

**EnteroMedics Inc.**

(Name of Issuer)

Common Stock

(Title of Class of Securities)

29365M 109

(CUSIP Number)

Bay City Capital Management LLC  
750 Battery Street, Suite 400  
San Francisco California 94111  
(415) 676-3830

with a copy to:

Justin MacCarthy, Esq.  
Jones Day  
555 California St., Floor 26  
San Francisco, California 94104  
(415) 875-5818

(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

February 19, 2009

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box o.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

**SCHEDULE 13D**

CUSIP No. 29365M 109

<b>1</b>	NAME OF REPORTING PERSONS. I.R.S.IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY). BAY CITY CAPITAL FUND IV, L.P.	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
<b>5</b>	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	<b>7</b>	SOLE VOTING POWER 0
	<b>8</b>	SHARED VOTING POWER 4,498,032
	<b>9</b>	SOLE DISPOSITIVE POWER 0
	<b>10</b>	SHARED DISPOSITIVE POWER 4,498,032
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,498,032	
<b>12</b>	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 15%	
<b>14</b>	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

**SCHEDULE 13D**

CUSIP No. 29365M 109

<b>1</b>	NAME OF REPORTING PERSONS. I.R.S.IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY). BAY CITY CAPITAL FUND IV CO-INVESTMENT FUND, L.P.	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
<b>5</b>	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	<b>7</b>	SOLE VOTING POWER 0
	<b>8</b>	SHARED VOTING POWER 4,498,032
	<b>9</b>	SOLE DISPOSITIVE POWER 0
	<b>10</b>	SHARED DISPOSITIVE POWER 4,498,032
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,498,032	
<b>12</b>	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 15%	
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**SCHEDULE 13D**

CUSIP No. 29365M 109

<b>1</b>	NAME OF REPORTING PERSONS. I.R.S.IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY). BAY CITY CAPITAL MANAGEMENT IV LLC	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
<b>5</b>	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	<b>7</b>	SOLE VOTING POWER 4,498,032
	<b>8</b>	SHARED VOTING POWER
	<b>9</b>	SOLE DISPOSITIVE POWER 4,498,032
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<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,498,032	
<b>12</b>	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 15%	
<b>14</b>	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) OO	

**SCHEDULE 13D**

CUSIP No. 29365M 109

<b>1</b>	NAME OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	BAY CITY CAPITAL LLC	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)	
	(a) <input checked="" type="checkbox"/>	
	(b) <input type="checkbox"/>	
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (SEE INSTRUCTIONS)	
	AF	
<b>5</b>	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)	
	<input type="checkbox"/>	
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION	
	Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	<b>7</b>	SOLE VOTING POWER
		4,498,032
	<b>8</b>	SHARED VOTING POWER
	<b>9</b>	SOLE DISPOSITIVE POWER
		4,498,032
<b>10</b>	SHARED DISPOSITIVE POWER	
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	4,498,032	
<b>12</b>	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)	
	<input type="checkbox"/>	
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)	
	15%	
<b>14</b>	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)	
	OO	

## SCHEDULE 13D

### Introduction

Bay City Capital LLC, a Delaware limited liability company ("BCC"), hereby files this Amendment No. 1 (this "Amendment") to its Statement on Schedule 13D filed on November 15, 2007 (the "Statement") on behalf of the Reporting Persons identified in Item 2 of the Statement pursuant to the Agreement With Respect To Schedule 13D attached to the Statement as Exhibit 7.1.

BCC is the manager of Bay City Capital Management IV, LLC, a Delaware limited liability company ("Management IV"), which is the general partner of Bay City Capital Fund IV, L.P., a Delaware limited partnership ("Fund IV"), and Bay City Capital Fund IV Co-Investment Fund, L.P., a Delaware limited partnership ("Co-Investment IV"). BCC is also an advisor to Fund IV and Co-Investment IV.

Items 3, 4, and 5 of the Statement are hereby amended to the extent hereinafter expressly set forth. All capitalized terms used and not expressly defined herein have the respective meanings ascribed to such terms in the Statement.

### **Item 3 — Source and Amount of Funds or Other Consideration**

Item 3 is hereby amended by adding the following to the end of this item:

On February 19, 2009, Fund IV and Co-Investment Fund IV purchased an aggregate of 1,649,485 shares of common stock of the Issuer, at a price of \$1.15 per share, and warrants to purchase 824,742 shares of common stock of the Issuer exercisable after 180 days, at purchase price of \$0.125 per share and with an exercise price of \$1.38 per share, in a private transaction with the Issuer.

All acquisitions of Issuer securities by Fund IV and Co-Investment IV since the filing of the original Statement have been cash purchases funded by capital contributions from the partners of Fund IV and Co-Investment IV pursuant to pre-existing capital commitments under the terms of the respective limited partnership agreements of Fund IV and Co-Investment IV.

### **Item 4 — Purpose of Transaction**

Item 4 is hereby amended and restated, in its entirety, to read:

The purpose of the transactions listed in Item 3 was to acquire the shares and warrants for investment purposes with the aim of increasing the value of the investment and the Issuer.

Subject to applicable legal requirements, one or more of the Reporting Persons may purchase additional securities of the Issuer from time to time in open market or private transactions, depending on their evaluation of the Issuer's business, prospects and financial condition, the market for the Issuer's securities, other developments concerning the Issuer, the reaction of the Issuer to the Reporting Persons' ownership of the Issuer's securities, other opportunities available to the Reporting Persons, and general economic, money market and stock market conditions. In addition, depending upon the factors referred to above, the Reporting Persons may dispose of all or a portion of their securities of the Issuer at any time.

Each of the Reporting Persons reserves the right to increase or decrease its holdings on such terms and at such times as each may decide.

Other than as described above in this Item 4, none of the Reporting Persons have any plan or proposal relating to or that would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries; (d) any change in the Board of Directors or management of the Issuer, including any plans or proposals to change the number or terms of directors or to fill any existing vacancies on the Board of Directors of the Issuer; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer's business or corporate structure; (g) any changes in the Issuer's charter, by-laws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person; (h) a class of securities of the Issuer being delisted from a national securities exchange or ceasing to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Exchange Act; or (j) any action similar to those enumerated above.

Carl Goldfischer, a Managing Director of BCC and a member of Management IV, is a director of the Issuer.

#### Item 5 — Interest in Securities of the Issuer

Item 5 is hereby amended and restated, in its entirety, to read:

<u>Reporting Person</u>	<u>Shares Underlying Warrants Held Directly</u>	<u>Shares Held Directly (5)</u>	<u>Sole Voting Power</u>	<u>Shared Voting Power</u>	<u>Sole Dispositive Power</u>	<u>Shared Dispositive Power</u>	<u>Beneficial Ownership (1)</u>	<u>Percentage of Class (2)</u>
<b>Fund IV</b>	53,786	4,349,338	0	4,498,032	0	4,498,032	4,498,032	15%
<b>Co-Investment IV</b>	1,160	93,748	0	4,498,032	0	4,498,032	4,498,032	15%
<b>Management IV (3)</b>	0	0	4,498,032	0	4,498,032	0	4,498,032	15%
<b>BCC (4)</b>	0	0	4,498,032	0	4,498,032	0	4,498,032	15%

- (1) Fund IV and Co-Investment IV constitute a "group" under Section 13(d) of the Exchange Act and consequently are deemed to have beneficial ownership of all shares held by members of the group.
- (2) This percentage is calculated based upon 30,077,774 shares of the Issuer's common stock outstanding as computed in accordance with Rule 13d-3(d)(1) promulgated under the Securities Exchange Act of 1934, which is the sum of: (i) 30,010,328 shares of the Issuer's common stock outstanding as of February 19, 2009, as provided by the Issuer, (ii) 54,946 shares issuable upon the exercise of warrants held by Fund IV and Co-Investment IV, and (iii) 12,500 shares issuable upon the exercise of options held by Carl Goldfischer.

- (3) Management IV holds no shares of common stock or warrants directly. Management IV is deemed to have beneficial ownership of common stock and warrants owned by Fund IV and Co-Investment IV due to its role as general partner of such funds. Investment and voting decisions by Management IV are exercised by BCC as manager.
- (4) BCC holds no shares of common stock or warrants directly. Due to its role as manager of Management IV, BCC is deemed to have beneficial ownership of common stock and warrants deemed to be beneficially owned by Management IV.
- (5) Amounts in this column include 12,236 shares for Fund IV and 264 shares for Co-Investment Fund IV underlying an option issued to Carl Goldfischer, a director of the Issuer, Managing Director of BCC and a Member of Management IV, in connection with his service as a director of the Issuer. As of 60 days from the date of this Amendment, Mr. Goldfischer shall have the right to exercise the option with respect to 12,500 shares. Mr. Goldfischer has entered into an agreement with Fund IV and Co-Investment Fund IV to immediately transfer any shares obtained via such option to Fund IV and Co-Investment Fund IV upon exercise.

The information required by Item 5 with respect to persons with whom voting or dispositive power is shared is set forth in Items 2 and 3.

The information required by Item 5 with respect to transactions in the common stock of the Issuer during the past 60 days is set forth in Item 3.

To the best knowledge of the Reporting Persons, no person other than the Reporting Persons has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the common stock of the Issuer.



**SCHEDULE 13D**

**Signature**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 19, 2009

/s/ Fred Craves

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Fred Craves, Managing Director  
Bay City Capital LLC  
for itself, for and on behalf of Bay City Capital  
Management IV LLC in its capacity as manager thereof,  
and for and on behalf of Bay City Capital Fund IV, L.P.  
and Bay City Capital Fund IV Co-Investment Fund, L.P.  
in its capacity as manager of Bay City Capital  
Management IV LLC, the general partner of Fund IV and  
Co-Investment IV