

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 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 10 9
(CUSIP Number)

LUKE EVNIN
MPM ASSET MANAGEMENT
THE JOHN HANCOCK TOWER
200 CLARENDON STREET, 54TH FLOOR
BOSTON, MASSACHUSETTS 02116
TELEPHONE: (617) 425-9200
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

September 30, 2010
(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 §§240.13d-1(e), 240.13d-1(f) or 240.13d-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 §240.13d-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*).

Explanatory Note

The following constitutes Amendment No. 1 to the Schedule 13D filed by the undersigned (the "Schedule 13D"). This Schedule 13D is being filed by the MPM Entities and the Listed Persons (each as defined below) to report the acquisition of shares of Series A Preferred (as defined below) and warrants to purchase Common Stock, of the Issuer (as defined below) on September 30, 2010 as described in Item 3 below.

1.	Name of Reporting Persons MPM BioVentures III-QP, L.P	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 1,529,381(2)
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 1,529,381(2)
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,529,381(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 18.6%(3)	
14.	Type of Reporting Person (see instructions) PN	

(1) This Schedule is filed by MPM BioVentures III-QP, L.P. ("BV III QP"), MPM BioVentures III, L.P. ("BV III"), MPM BioVentures III Parallel Fund, L.P. ("BV III PF"), MPM BioVentures III GmbH & Co. Beteiligungs KG ("BV III KG"), MPM Asset Management Investors 2002 BVIII LLC ("AM LLC"), MPM BioVentures III GP, L.P. ("BV III GP") and MPM BioVentures III LLC ("BV III LLC" and collectively with BV III QP, BV III, BV III PF, BV III KG, AM LLC and BV III GP, the "MPM Entities") and Luke Evnin, Ansbert Gadicke, Nicholas Galakatos, Michael Steinmetz, Kurt Wheeler, Nicholas Simon III and Dennis Henner (collectively, the "Listed Persons"). BVIII GP and BVIII LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Listed Persons are Series A members of BV III LLC and managers of AM LLC. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Includes 586,338 shares of common stock, par value \$0.01 per share (the "Common Stock") initially issuable upon conversion of 586,338 shares of Series A Non-Voting Convertible Preferred Stock (the "Series A Preferred"), which are convertible within 60 days of the date of this filing, and (ii) 139,899 shares of Common Stock issuable pursuant to warrants, which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 7,478,079 shares of EnteroMedics Inc.'s (the "Issuer's") Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons MPM BioVentures III, L.P	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 102,829(2)
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 102,829(2)
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 102,829(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 1.4%(3)	
14.	Type of Reporting Person (see instructions) PN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Includes (i) 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, which are convertible within 60 days of the date of this filing, and (ii) 9,405 shares of Common Stock issuable pursuant to warrants, which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons MPM Asset Management Investors 2002 BVIII LLC	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 30,215(2)
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 30,215(2)
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 30,215(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 0.4%(3)	
14.	Type of Reporting Person (see instructions) 00	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Includes (i) 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, which are convertible within 60 days of the date of this filing, and (ii) 2,763 shares of Common Stock issuable pursuant to warrants, which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons MPM BioVentures III Parallel Fund, L.P	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 46,204(2)
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 46,204(2)
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 46,204(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 0.6%(3)	
14.	Type of Reporting Person (see instructions) PN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Includes (i) 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, which are convertible within 60 days of the date of this filing, and (ii) 4,226 shares of Common Stock issuable pursuant to warrants, which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons MPM BioVentures III GmbH & Co. Beteiligungs KG	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Germany	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 129,238(2)
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 129,238(2)
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 129,238(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 1.7%(3)	
14.	Type of Reporting Person (see instructions) PN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Includes (i) 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, which are convertible within 60 days of the date of this filing, and (ii) 11,821 shares of Common Stock issuable pursuant to warrants, which are exercisable within 60 days of the date of this filing.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons MPM BioVentures III GP, L.P
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)
3.	SEC USE ONLY
4.	Source of Funds (see instructions) WC
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>
6.	Citizenship or Place of Organization Delaware
Number of Shares Beneficially Owned by Each Reporting Person With	7. Sole Voting Power 0
	8. Shared Voting Power 1,807,652(2)
	9. Sole Dispositive Power 0
	10. Shared Dispositive Power 1,807,652(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,807,652(2)
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>
13.	Percent of Class Represented by Amount in Row 11 21.7%(3)
14.	Type of Reporting Person (see instructions) PN

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; and 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.



1.	Name of Reporting Persons MPM BioVentures III LLC	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,807,652(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,807,652(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,807,652(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 21.7%(3)	
14.	Type of Reporting Person (see instructions) OO	

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(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; and 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer’s Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the “Exchange Act”), as set forth in the Issuer’s Definitive Proxy Statement dated October 1, 2010.



1.	Name of Reporting Persons Luke Evnin	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 5,487 (2)
	8.	Shared Voting Power 1,837,867(3)
	9.	Sole Dispositive Power 5,487 (2)
	10.	Shared Dispositive Power 1,837,867(3)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,843,354 (2)(3)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.1%(4)	
14.	Type of Reporting Person (see instructions) IN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a “group” for purposes of this Schedule 13D.

(2) Consists of shares of Common Stock issuable pursuant to options which are exercisable within 60 days of the date of this filing.

(3) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,868 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(4) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Ansbert Gadicke	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,837,867(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)	
14.	Type of Reporting Person (see instructions) IN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,868 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Nicholas Galakatos
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)
3.	SEC USE ONLY
4.	Source of Funds (see instructions) OO
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>
6.	Citizenship or Place of Organization United States
Number of Shares Beneficially Owned by Each Reporting Person With	7. Sole Voting Power 0
	8. Shared Voting Power 1,837,867(2)
	9. Sole Dispositive Power 0
	10. Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)
14.	Type of Reporting Person (see instructions) IN

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(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,862 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Michael Steinmetz	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,837,867(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)	
14.	Type of Reporting Person (see instructions) IN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,862 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Kurt Wheeler	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,837,867(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)	
14.	Type of Reporting Person (see instructions) IN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,862 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Nicholas Simon III	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,837,867(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)	
14.	Type of Reporting Person (see instructions) IN	

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(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,862 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

1.	Name of Reporting Persons Dennis Henner	
2.	Check the Appropriate Box if a Member of a Group (see instructions) (a) <input type="radio"/> (b) <input checked="" type="checkbox"/> (1)	
3.	SEC USE ONLY	
4.	Source of Funds (see instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Item 2(d) or 2(e) <input type="radio"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,837,867(2)
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,837,867(2)
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,837,867(2)	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (see instructions) <input type="radio"/>	
13.	Percent of Class Represented by Amount in Row 11 22.0%(3)	
14.	Type of Reporting Person (see instructions) IN	

(1) This Schedule is filed by the MPM Entities and the Listed Persons. The MPM Entities and the Listed Persons expressly disclaim status as a "group" for purposes of this Schedule 13D.

(2) Consists of 803,144 shares of Common Stock, 586,338 shares of Common Stock initially issuable upon conversion of 586,338 shares of Series A Preferred, and 139,899 shares of Common Stock issuable upon exercise of warrants held by BV III QP; 54,001 shares of Common Stock, 39,423 shares of Common Stock initially issuable upon conversion of 39,423 shares of Series A Preferred, and 9,405 shares of Common Stock issuable upon exercise of warrants held by BV III; 24,264 shares of Common Stock, 17,714 shares of Common Stock initially issuable upon conversion of 17,714 shares of Series A Preferred, and 4,226 shares of Common Stock issuable upon exercise of warrants held by BV III PF; 67,869 shares of Common Stock, 49,548 shares of Common Stock initially issuable upon conversion of 49,548 shares of Series A Preferred, and 11,821 shares of Common Stock issuable upon exercise of warrants held by BV III KG; and 15,862 shares of Common Stock, 11,584 shares of Common Stock initially issuable upon conversion of 11,584 shares of Series A Preferred, and 2,763 shares of Common Stock issuable upon exercise of warrants held by AM LLC. The shares Series A Preferred listed above are convertible within 60 days of the date of this filing and the warrants listed above are exercisable within 60 days of the date of this filing. BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC.

(3) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.

Introductory Note: This Amendment No. 1 to Schedule 13D (this “Amendment No. 1”) amends and supplements the Schedule 13D originally filed with the United States Securities and Exchange Commission (the “SEC”) on February 24, 2009 (the “Original Schedule 13D”). The persons and entities filing this Amendment No. 1 are MPM BioVentures III-QP, L.P. (“BV III QP”), MPM BioVentures III, L.P. (“BV III”), MPM BioVentures III Parallel Fund, L.P. (“BV III PF”), MPM BioVentures III GmbH & Co. Beteiligungs KG (“BV III KG”), MPM Asset Management Investors 2002 BVIII LLC (“AM LLC”), MPM BioVentures III GP, L.P. (“BV III GP”), MPM BioVentures III LLC (“BV III LLC”) (each an “MPM Entity” and collectively, the “MPM Entities”) and Luke Evnin, Ansbert Gadick, Nicholas Galakatos, Michael Steinmetz, Kurt Wheeler, Nicholas Simon III and Dennis Henner (collectively, the “Listed Persons” and together with the MPM Entities, the “Filing Persons”). The Original Schedule 13D, as amended by this Amendment No. 1 (the “Schedule 13D”), relates to the common stock, par value \$0.01 per share (the “Common Stock”), of EnteroMedics Inc. (the “Issuer”). This Amendment No. 1 is being made to reflect the recent participation of the MPM Entities in the private placement of securities of the Issuer on September 30, 2010 as more fully described in Item 3 below. Capitalized terms used herein but not defined shall have the meanings ascribed to them in the Original Schedule 13D. This Amendment No. 1 amends the Original Schedule 13D as specifically set forth herein. Except as set forth below, all previous Items in the Original Schedule 13D remain unchanged.

Item 3. Source and Amount of Funds or Other Consideration

Item 3 of the Original Schedule 13D is hereby supplemented by adding the following:

Pursuant to the terms of that certain Securities Purchase Agreement by and among the Issuer and the MPM Entities, and various other investors (each a “Series A Investor” and collectively, the “Series A Investors”), dated September 29, 2010 (the “Series A Preferred Stock Purchase Agreement”), the MPM Entities purchased an aggregate of 704,607 shares of Series A Non-Voting Convertible Preferred Stock (the “Series A Preferred”), at a price of \$1.72 per share (the “Original Purchase Price”), together with associated warrants (the “Up Front Warrants”) to acquire an aggregate of 704,607 shares of Common Stock at a price per share of \$0.125 (the “Financing”). The Up Front Warrants have an exercise price of \$2.15 per share, which equals 125% of the consolidated closing bid price of the Issuer’s common stock as reported by the Nasdaq Stock Market on September 29, 2010. The Up Front Warrants exercise period (the “Up Front Warrant Exercise Period”) will begin upon the later to occur of the following: (i) March 29, 2011 or (ii) immediately after the closing of an offering by the Issuer of equity securities producing gross proceeds of at least \$15 million excluding proceeds from the sale of Series A Preferred Stock (the “Equity Offering”) and will end on the fifth anniversary of the date on which the Up Front Warrant Exercise Period begins. The applicable per share purchase price and the number of shares issuable upon exercise of the Up Front Warrants are subject to adjustment for the occurrence of certain events, including stock dividends, splits, subdivisions, combinations, reorganizations and reclassifications. The aggregate purchase price of the Series A Preferred and the Up Front Warrants was \$1.3 million.

If the Series A Preferred convert into common stock upon completion of an Equity Offering in accordance with the terms of the Certificate of Designations for Series A Non-Voting Convertible Preferred Stock authorized by the Issuer’s board of directors and filed with the Secretary of State of the State of Delaware on September 29, 2010 (the “Certificate of Designations”), each Series A Investor will purchase additional warrants from the Issuer (the “Conversion Warrants”) to purchase that number of shares of the Common Stock equal to (i) the difference between the Original Purchase Price and the price per share of Common Stock underlying the equity securities paid by the Series A Investor in an Equity Offering (the “Equity Offering Purchase Price”), multiplied by the number of shares of Series A Preferred Stock purchased by the Series A Investor, divided by (ii) the Conversion Warrant exercise price per share, which will equal \$2.06 (120% of the Original Purchase Price). The Conversion Warrants will only be issued if the Issuer completes the Equity Offering and the Original Purchase Price is more than the Equity Offering Purchase Price.

The funds used by the MPM Entities to acquire the securities described herein were obtained from capital contributions by their partners and from direct capital commitments by the MPM Entities.

Item 4. Purpose of Transaction

Item 4 of the Original Schedule 13D is hereby supplemented by adding the following:

The MPM Entities agreed to purchase the Series A Preferred and the Up Front Warrants for investment purposes with the aim of increasing the value of their investments and the Issuer.

Item 5. Interest in Securities of the Issuer

The following information with respect to the beneficial ownership of the Common Stock of the Issuer by the persons filing this Schedule 13D is provided as of the date of this filing:

MPM Entity	Shares Held Directly	Shares Issuable upon Conversion of Series A Preferred Held Directly(1)	Shares Issuable Upon Exercise of Warrants Held Directly(1)	Shares Issuable Upon Exercise of Options Held Directly(1)	Sole Voting Power	Shared Voting Power	Sole Dispositive Power	Shared Dispositive Power	Beneficial Ownership	Percentage of Class (2)
BV III QP	803,144	586,338	139,899	0	1,529,381	0	1,529,381	0	1,529,381	18.6%
BV III	54,001	39,423	9,405	0	102,829	0	102,829	0	102,829	1.4%
AM LLC	15,868	11,584	2,763	0	30,215	0	30,215	0	30,215	0.4%
BV III PF	24,264	17,714	4,226	0	46,204	0	46,204	0	46,204	0.6%
BV III KG	67,869	49,548	11,821	0	129,238	0	129,238	0	129,238	1.7%
BV III GP(3)	0	0	0	0	0	1,807,652	0	1,807,652	1,807,652	21.7%
BV III LLC(3)	0	0	0	0	0	1,807,652	0	1,807,652	1,807,652	21.7%
Luke Evnin(4)										
(5)	0	0	0	5,487	5,487	1,837,867	5,487	1,837,867	1,843,354	22.1%
Ansbert										
Gadicke(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%
Nicholas										
Galakatos(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%
Michael										
Steinmetz(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%
Kurt Wheeler(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%
Nicholas Simon										
III(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%
Dennis Henner(4)	0	0	0	0	0	1,837,867	0	1,837,867	1,837,867	22.0%

- (1) Comprised of securities exercisable within 60 days of the filing date of this Amendment No. 1. Because the Up Front Warrants are not exercisable within 60 days of the filing date, the shares of Common Stock underlying the Up Front Warrants are not included above.
- (2) This percentage is calculated based upon 7,478,079 shares of the Issuer's Common Stock outstanding as of August 31, 2010 and as adjusted pursuant to Rule 13d-3(d)(1) promulgated under the Exchange Act of 1934, as amended (the "Exchange Act"), as set forth in the Issuer's Definitive Proxy Statement dated October 1, 2010.
- (3) BV III GP and BV III LLC are the direct and indirect general partners of BV III QP, BV III, BV III PF and BV III KG. The securities are held as follows: BV III QP: 803,144 shares of Common Stock, 586,338 shares of Common Stock issuable upon conversion of 586,338 shares of Series A Preferred and warrants to purchase 139,899 shares of Common Stock; BV III: 54,001 shares of Common Stock, 39,423 shares of Common Stock issuable upon conversion of 39,423 shares of Series A Preferred and warrants to purchase 9,405 shares of Common Stock; BV III PF: 24,264 shares of Common Stock, 17,714 shares of Common Stock issuable upon conversion of 17,714 shares of Series A Preferred and warrants to purchase 4,226 shares of Common Stock; and BV III KG: 67,869 shares of Common Stock, 49,548 shares of Common Stock issuable upon conversion of 49,548 shares of Series A Preferred and warrants to purchase 11,821 shares of Common Stock.
- (4) The Reporting Person is a Series A member of BV III LLC and a manager of AM LLC. The securities are held as follows: BV III QP: 803,144 shares of Common Stock, 586,338 shares of Common Stock issuable upon conversion of 586,338 shares of Series A Preferred and warrants to purchase 139,899 shares of Common Stock; BV III: 54,001 shares of Common Stock, 39,423 shares of Common Stock issuable upon conversion of 39,423 shares of Series A Preferred and warrants to purchase 9,405 shares of Common Stock; BV III PF: 24,264 shares of Common Stock, 17,714 shares of Common Stock issuable upon conversion of 17,714 shares of Series A Preferred and warrants to purchase 4,226 shares of Common Stock; BV III KG: 67,869 shares of Common Stock, 49,548 shares of Common Stock issuable upon conversion of 49,548 shares of Series A Preferred and warrants to purchase 11,821 shares of Common Stock; and AM LLC: 15,868 shares of Common Stock, 11,584 shares of Common Stock issuable upon conversion of 11,584 shares of Series A Preferred and warrants to purchase 2,763 shares of Common Stock.
- (5) Includes shares issuable upon the exercise of options within 60 days of the filing date.

The information provided and incorporated by reference in Item 3 is hereby incorporated by reference.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Item 6 of the Original Schedule 13D is hereby supplemented by adding the following:

The Series A Preferred Stock Purchase Agreement includes standard representations and warranties of the Issuer and the Series A Investors, as well as additional terms and conditions, including those set forth below. The Issuer has agreed to indemnify the Series A Investors and specified related parties against damages with respect to breaches of the representations and warranties or failure to comply with the covenants and agreements of the Issuer in the Series A Preferred Stock Purchase Agreement. The Series A Preferred Stock Purchase Agreement may be modified, waived or amended pursuant to an instrument in writing signed by the Issuer and Series A Investors.

Registration Rights

Pursuant to the Series A Preferred Stock Purchase Agreement, the Issuer agreed to file a registration statement with the SEC within 45 days following completion of an Equity Offering (the "Required Filing Date"), registering for resale the shares of common stock issued upon conversion of the Preferred Stock and exercise of the warrants purchased by the Series A Investors for an offering to be made on a continuous basis pursuant to Rule 415 promulgated by the SEC pursuant to the Securities Act. The Issuer also agreed to use its best efforts, subject to receipt of necessary information from the Series A Investors, to cause the registration statement to become effective as soon as practicable after the registration statement is filed by the Issuer, but in any event no later than 4:00 p.m. Eastern Time on the 90th day after the Required Filing Date, or if the registration statement is reviewed by the SEC, on the 135th day after the Required Filing Date. The Issuer has agreed to maintain the registration statement's effectiveness until the earlier of (i) the first anniversary of the Closing Date (such period of time to be extended by any period of time that the Common Stock is not listed for trading on the Nasdaq Stock Market), (ii) the date on which the registrable securities may be sold pursuant to Rule 144 without limitations on volume or manner of sales or (iii) such time as all registrable securities purchased by the Series A Investors have been sold pursuant to a registration statement or Rule 144.

Certificate of Designations

Each holder of Series A Preferred has the rights, preferences and duties set forth in the Certificate of Designations authorized by the Issuer's board of directors and filed with the Secretary of State of the State of Delaware on September 29, 2010. The following is a summary of certain material provisions of such certificate.

Dividends

Dividends will be paid on the Series A Preferred on an as-converted basis when, as, and if paid on the Issuer's Common Stock.

Liquidation Preference

In the event of any liquidation, dissolution or winding up of the Issuer, any distributions to holders of the Issuer's outstanding equity shall be made as follows: First, to the holder of any share of Series A Preferred up to 150% of the Original Purchase Price plus declared and unpaid dividends on each share of Series A Preferred, and then pro rata to the holders of the Common Stock and Series A Preferred on an as converted basis.

No Voting Rights

Except as required by law or as otherwise set forth below, the Series A Preferred shall be non-voting and shall not have any voting rights. So long as 10% of the shares of Series A Preferred are outstanding, in addition to any other vote or approval required under the Issuer's Fifth Amended and Restated Certificate of Incorporation or the Issuer's Amended and Restated By-laws, the Issuer will not, without the written consent of the holders of at least 75% of the Series A Preferred, either directly or by amendment, merger, consolidation, or otherwise: (i) create or authorize the creation of or issue any other security convertible into or exercisable for any equity security, having rights, preferences or privileges senior to or on parity with the Series A Preferred, or increase the authorized number of shares of Series A Preferred; or (ii) purchase or redeem or pay any dividend on any capital stock prior to the Series A Preferred, other than stock repurchased from former employees or consultants in connection with the cessation of their employment/services, at the lower of fair market value or cost; other than as approved by the Issuer's board of directors.

No Redemption; No Sinking Fund

The Series A Preferred are not redeemable upon the request of the holders thereof or exchangeable for other capital stock or indebtedness of the Issuer or other property. The Series A Preferred are not subject to the operation of a purchase, retirement or sinking fund.

Conversion Rights

The Series A Preferred may initially be converted on a 1:1 basis into shares of Common Stock at any time at the option of the holder, subject to adjustments for stock dividends, splits, combinations and similar events (the "Conversion Ratio"); *provided, however*, that no holder will be permitted to convert an amount of Series A Preferred that would result in such holder owning more than 19.99% of the Issuer's outstanding Common Stock upon such conversion.

Additionally, each share of Series A Preferred will automatically be converted at the Conversion Ratio into shares of Common Stock, subject to the potential adjustment described below: (i) immediately after the closing of an Equity Offering, or (ii) upon the written consent of the holders of 75% of the Series A Preferred; *provided, however*, that in the case of (i) and (ii) above, no holder will be permitted to convert an amount of Series A Preferred that would result in such holder owning more than 19.99% of the Issuer's outstanding Common Stock upon such conversion. In the event

of conversion immediately following the closing of an Equity Offering pursuant to (i) above, if the Equity Offering Purchase Price is less than \$1.72, the Conversion Ratio shall be determined by dividing (A) \$1.72 by (B) the sum of \$1.72 plus the Conversion Price. "Conversion Price" means \$0.125 *multiplied* by the number of shares of Common Stock issuable under the converting holder's Conversion Warrant *divided* by the number of Series A Preferred held by such converting holder.

The information provided and incorporated by reference in Items 3, 4 and 5 is hereby incorporated by reference.

Other than as described in this Schedule 13D, to the best of the MPM Entities' and Listed Persons' knowledge, there are no other contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 of the Original Schedule 13D and between such persons and any person with respect to any securities of the Issuer.

Item 7. Material to Be Filed as Exhibits

- A. Form of Securities Purchase Agreement by and among the Issuer and certain purchasers, dated September 29, 2010 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - B. Form of Up Front Warrant to purchase shares of common stock (incorporated by reference to Exhibit 10.2 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - C. Form of Conversation Warrant to purchase shares of common stock (incorporated by reference to Exhibit 10.3 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - D. Form of Certificate of Designations for Series A Non-Voting Convertible Preferred Stock, dated September 29, 2010 (incorporated by reference to Exhibit 10.4 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (File No. 001-33818)).
 - E. Agreement regarding filing of joint Schedule 13D.
-

SIGNATURES

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: October 12, 2010

MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III PARALLEL FUND, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

By: MPM BioVentures III GP, L.P.,
in its capacity as the Managing Limited Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2002 BVIII LLC

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Manager

MPM BIOVENTURES III GP, L.P.

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III LLC

By: /s/ Luke Evnin
Name: Luke Evnin
Title: Series A Member

By: /s/ Luke Evnin
Name: Luke Evnin

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke

By: /s/ Nicholas Galakatos
Name: Nicholas Galakatos

By: /s/ Michael Steinmetz
Name: Michael Steinmetz

By: /s/ Kurt Wheeler
Name: Kurt Wheeler

By: /s/ Nicholas Simon III
Name: Nicholas Simon III

By: /s/ Dennis Henner
Name: Dennis Henner

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative (other than an executive officer or general partner of the filing person), evidence of the representative's authority to sign on behalf of such person shall be filed with the statement; provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (See 18 U.S.C. 1001)

SCHEDULE I

General Partners/Members:

Luke Evnin
c/o MPM Asset Management
The John Hancock Tower
200 Clarendon Street, 54th Floor
Boston, Massachusetts 02116
Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Ansbert Gadicke
c/o MPM Asset Management
The John Hancock Tower
200 Clarendon Street, 54th Floor
Boston, Massachusetts 02116
Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Nicholas Galakatos
c/o MPM Asset Management
The John Hancock Tower
200 Clarendon Street, 54th Floor
Boston, Massachusetts 02116
Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Michael Steinmetz
c/o MPM Asset Management
The John Hancock Tower
200 Clarendon Street, 54th Floor
Boston, Massachusetts 02116
Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Kurt Wheeler
c/o MPM Asset Management
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Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Nicholas Simon III
c/o MPM Asset Management
The John Hancock Tower
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Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

Dennis Henner
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The John Hancock Tower
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Boston, Massachusetts 02116

Principal Occupation: Series A member of the general partner of the general partner of MPM BioVentures III-QP, L.P., MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P. and MPM BioVentures III GmbH & Co. Beteiligungs KG and manager of MPM Asset Management Investors 2002 BVIII LLC
Citizenship: USA

EXHIBIT INDEX

- A. Form of Securities Purchase Agreement by and among the Issuer and certain purchasers, dated September 29, 2010 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - B. Form of Up Front Warrant to purchase shares of common stock (incorporated by reference to Exhibit 10.2 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - C. Form of Conversation Warrant to purchase shares of common stock (incorporated by reference to Exhibit 10.3 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (SEC File No. 001-33818)).
 - D. Form of Certificate of Designations for Series A Non-Voting Convertible Preferred Stock, dated September 29, 2010 (incorporated by reference to Exhibit 10.4 to the Issuer's Current Report on Form 8-K filed on October 5, 2010 (File No. 001-33818)).
 - E. Agreement regarding filing of joint Schedule 13D.
-

JOINT FILING STATEMENT

I, the undersigned, hereby express my agreement that the attached Schedule 13D (and any amendments thereto) relating to the Common Stock of EnteroMedics Inc. is filed on behalf of each of the undersigned.

Dated: October 12, 2010

MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

MPM BIOVENTURES III PARALLEL FUND, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

By: MPM BioVentures III GP, L.P.,
in its capacity as the Managing Limited Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2002 BVIII LLC

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Manager

MPM BIOVENTURES III GP, L.P.

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

MPM BIOVENTURES III LLC

By: /s/ Luke Evinin
Name: Luke Evinin
Title: Series A Member

By: /s/ Luke Evinin
Name: Luke Evinin

By: /s/ Ansbert Gadicke
Name: Ansbert Gadicke

By: /s/ Nicholas Galakatos
Name: Nicholas Galakatos

By: /s/ Michael Steinmetz
Name: Michael Steinmetz

By: /s/ Kurt Wheeler
Name: Kurt Wheeler

By: /s/ Nicholas Simon III
Name: Nicholas Simon III

By: /s/ Dennis Henner
Name: Dennis Henner