
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

SCHEDULE 13D

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

Verastem, Inc.

(Name of issuer)

Common Stock, par value \$0.0001 per share
(Title of class of securities)

92337C104
(CUSIP number)

**Christoph Westphal, M.D., Ph.D.
Longwood Fund Management
Prudential Tower, Suite 1555
800 Boylston Street
Boston, Massachusetts 02199
(617) 351-2590**

with a copy to:
**Thomas A. Beaudoin
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109**

(Name, address and telephone number of person authorized to receive notices and communications)

February 1, 2012
(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.

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).

(1)	Names of reporting persons Longwood Fund, L.P.	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
(3)	SEC use only	
(4)	Source of funds (see instructions) WC	
(5)	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
(6)	Citizenship or place of organization Delaware, United States of America	
Number of shares beneficially owned by each reporting person with:	(7)	Sole voting power 0
	(8)	Shared voting power 2,869,841
	(9)	Sole dispositive power 0
	(10)	Shared dispositive power 2,869,841
(11)	Aggregate amount beneficially owned by each reporting person 2,869,841 (see Attachment A)	
(12)	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
(13)	Percent of class represented by amount in Row (11) 13.63% (see Attachment A)	
(14)	Type of reporting person (see instructions) PN	

(1)	Names of reporting persons Longwood Fund GP, LLC	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
(3)	SEC use only	
(4)	Source of funds (see instructions) WC	
(5)	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
(6)	Citizenship or place of organization Delaware, United States of America	
Number of shares beneficially owned by each reporting person with:	(7)	Sole voting power 0
	(8)	Shared voting power 2,869,841
	(9)	Sole dispositive power 0
	(10)	Shared dispositive power 2,869,841
(11)	Aggregate amount beneficially owned by each reporting person 2,869,841 (see Attachment A)	
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(13)	Percent of class represented by amount in Row (11) 13.63% (see Attachment A)	
(14)	Type of reporting person (see instructions) OO	

(1)	Names of reporting persons Christoph Westphal, M.D., Ph.D.	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
(3)	SEC use only	
(4)	Source of funds (see instructions) AF	
(5)	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
(6)	Citizenship or place of organization United States citizen	
Number of shares beneficially owned by each reporting person with:	(7)	Sole voting power 0
	(8)	Shared voting power 2,869,841
	(9)	Sole dispositive power 0
	(10)	Shared dispositive power 2,869,841
(11)	Aggregate amount beneficially owned by each reporting person 2,869,841 (see Attachment A)	
(12)	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
(13)	Percent of class represented by amount in Row (11) 13.63% (see Attachment A)	
(14)	Type of reporting person (see instructions) IN	

(1)	Names of reporting persons Richard Aldrich	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
(3)	SEC use only	
(4)	Source of funds (see instructions) AF	
(5)	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
(6)	Citizenship or place of organization United States citizen	
Number of shares beneficially owned by each reporting person with:	(7)	Sole voting power 0
	(8)	Shared voting power 2,869,841
	(9)	Sole dispositive power 0
	(10)	Shared dispositive power 2,869,841
(11)	Aggregate amount beneficially owned by each reporting person 2,869,841 (see Attachment A)	
(12)	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
(13)	Percent of class represented by amount in Row (11) 13.63% (see Attachment A)	
(14)	Type of reporting person (see instructions) IN	

(1)	Names of reporting persons Michelle Dipp, M.D., Ph.D.	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
(3)	SEC use only	
(4)	Source of funds (see instructions) AF	
(5)	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
(6)	Citizenship or place of organization United States citizen	
Number of shares beneficially owned by each reporting person with:	(7)	Sole voting power 0
	(8)	Shared voting power 2,869,841
	(9)	Sole dispositive power 0
	(10)	Shared dispositive power 2,869,841
(11)	Aggregate amount beneficially owned by each reporting person 2,869,841 (see Attachment A)	
(12)	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
(13)	Percent of class represented by amount in Row (11) 13.63% (see Attachment A)	
(14)	Type of reporting person (see instructions) IN	

Item 1. Security and Issuer.

This statement on Schedule 13D relates to the Reporting Persons' (as defined in Item 2 below) beneficial ownership interest in the common stock, par value \$0.0001 per share (the "Common stock"), of Verastem, Inc., a Delaware corporation (the "Issuer"). The address of the principal executive office of the Issuer is 215 First Street, Suite 440, Cambridge, Massachusetts 02142. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable.

Item 2. Identity and Background.

(a) This statement is filed by:

- (i) Longwood Fund, L.P. (the "Fund"), with respect to the shares of Common Stock directly and beneficially owned by it;
- (ii) Longwood Fund GP, LLC (the "General Partner"), with respect to the shares of Common Stock directly and beneficially owned by it;
- (iii) Christoph Westphal, M.D., Ph.D. ("Westphal"), with respect to the shares of Common Stock directly and beneficially owned by him;
- (iv) Richard Aldrich ("Aldrich"), with respect to the shares of Common Stock directly and beneficially owned by him; and
- (v) Michelle Dipp, M.D., Ph.D. ("Dipp"), with respect to the shares of Common Stock directly and beneficially owned by her.

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

(b) The business address of each of the Reporting Persons:

Longwood Fund
Prudential Tower, Suite 1555
800 Boylston Street
Boston, Massachusetts 02199

(c) The present principal business of each of the Reporting Persons is the venture capital investment business.

(d) No Reporting Person, during the last five years, has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) No Reporting Person, during the last five years, has been party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Citizenship.

The Fund	Delaware, United States of America
The General Partner	Delaware, United States of America
Westphal	United States of America
Aldrich	United States of America
Dipp	United States of America

Item 3. Source and Amount of Funds or Other Consideration.

From November 3, 2010 through November 1, 2011, the Reporting Persons acquired an aggregate of (i) 4,000,000 shares of Series A convertible preferred stock of the Issuer, (ii) 3,500,000 shares of Series B convertible preferred stock of the Issuer and (iii) 444,444 shares of Series C convertible preferred stock of the Issuer. The Issuer acquired such shares for an aggregate purchase price of approximately \$12 million. All such shares were acquired with working capital.

Following completion of the Issuer's initial public offering on February 1, 2012 (the "IPO"), the Reporting Persons' shares of the Issuer's Series A convertible preferred stock, Series B convertible preferred stock and Series C convertible preferred stock were converted into Common Stock on a 1-for-3.5 basis.

After the conversion of the Series A convertible preferred stock, Series B convertible preferred stock and Series C convertible preferred stock into Common Stock, the Reporting Persons owned 2,269,841 shares of Common Stock.

In conjunction with the Issuer's IPO, the Fund purchased 600,000 shares of Common Stock, resulting in an increase in beneficial ownership by the Reporting Persons by that amount. The purchase was made at the initial public offering price of \$10.00 per share, for an aggregate purchase price of \$6,000,000. The working capital of the Fund was the source of funds for the purchase of the shares of Common Stock.

Item 4. Purpose of Transaction.

The shares of capital stock reported herein were acquired solely for investment purposes. None of the Reporting Persons have any present plans or proposals that relate to or would result in any change in the business, policies, management, structure or capitalization of the Issuer. The Reporting Persons reserve the right to acquire, or dispose of, additional securities of the Issuer in the ordinary course of their business, to the extent deemed advisable in light of their general investment and trading policies, market conditions or other factors. The Reporting Persons may engage in discussions from time to time with other stockholders of the Issuer regarding the acquisition by the Reporting Persons of others of shares of the Issuer's Common Stock held by such stockholders.

Christoph Westphal, M.D., Ph.D. is the CEO of the Issuer and is also a manager of the General Partner. Richard Aldrich is a member of the Board of Directors of the Issuer and is also a manager of the General Partner.

The Reporting Persons may seek information from management and the Issuer's Board of Directors, and may engage in further discussions with management, the Issuer's Board of Directors, other stockholders of the Issuer and other relevant parties, concerning the business, operations, governance, management, strategy, capitalization and/or future plans of the Issuer, or in proposing one or more of the other actions described in subparagraphs (a) through (j) of this Item 4. In addition, the Reporting Persons may exercise their rights under the Investors' Rights Agreement, as defined below.

Other than as described above and as set forth in the Investors' Rights Agreement, as defined below, the Reporting Persons do not have any plans or proposals which would result in any of the following:

- (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 present Issuer's board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (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) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions that may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease 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 Securities Exchange Act of 1934, as amended; or
- (j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

The aggregate percentage of shares of Common Stock reported beneficially owned by each person named herein is determined in accordance with SEC rules and is based upon 21,059,116 shares of the Issuer's Common Stock outstanding, which is the sum of (i) 20,234,116 shares of Common Stock outstanding, which is the total number of shares of Common Stock outstanding as reported in the prospectus filed with the Securities and Exchange Commission on January 27, 2012 in connection with the Issuer's IPO, and giving effect to the IPO and (ii) 825,000 shares of Common Stock issued pursuant to the exercise of the underwriter's over-allotment option in connection with such offering. The applicable SEC rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities.

A. Longwood Fund, L.P.

(a) As of the closing of business on February 14, 2012, Longwood Fund, L.P. beneficially owned 2,869,841 shares of Common Stock, representing a beneficial ownership of approximately 13.63% of the shares of Common Stock.

(b)	1. Sole power to vote or direct vote:	0
	2. Shared power to vote or direct vote:	2,869,841
	3. Sole power to dispose or direct the disposition:	0
	4. Shared power to dispose or direct the disposition:	2,869,841

Please see Attachment A for additional information.

B. Longwood Fund GP, LLC

(a) As of the closing of business on February 14, 2012, Longwood Fund GP, LLC beneficially owned 2,869,841 shares of Common Stock, representing a beneficial ownership of approximately 13.63% of the shares of Common Stock.

(b)	1. Sole power to vote or direct vote:	0
	2. Shared power to vote or direct vote:	2,869,841
	3. Sole power to dispose or direct the disposition:	0
	4. Shared power to dispose or direct the disposition:	2,869,841

Please see Attachment A for additional information.

C. Christoph Westphal, M.D., Ph.D.

(a) As of the closing of business on February 14, 2012, Christoph Westphal, M.D., Ph.D. beneficially owned 2,869,841 shares of Common Stock, representing a beneficial ownership of approximately 13.63% of the shares of Common Stock.

(b)	1. Sole power to vote or direct vote:	0
	2. Shared power to vote or direct vote:	2,869,841
	3. Sole power to dispose or direct the disposition:	0
	4. Shared power to dispose or direct the disposition:	2,869,841

Please see Attachment A for additional information.

D. Richard Aldrich

(a) As of the closing of business on February 14, 2012, Richard Aldrich beneficially owned 2,869,841 shares of Common Stock, representing a beneficial ownership of approximately 13.63% of the shares of Common Stock.

(b)	1. Sole power to vote or direct vote:	0
	2. Shared power to vote or direct vote:	2,869,841
	3. Sole power to dispose or direct the disposition:	0
	4. Shared power to dispose or direct the disposition:	2,869,841

Please see Attachment A for additional information.

E. Michelle Dipp, M.D., Ph.D.

(a) As of the closing of business on February 14, 2012, Michelle Dipp, M.D., Ph.D. beneficially owned 2,869,841 shares of Common Stock, representing a beneficial ownership of approximately 13.63% of the shares of Common Stock.

(b)	1. Sole power to vote or direct vote:	0
	2. Shared power to vote or direct vote:	2,869,841
	3. Sole power to dispose or direct the disposition:	0
	4. Shared power to dispose or direct the disposition:	2,869,841

Please see Attachment A for additional information.

(c) The Fund acquired 2,269,841 shares of Common Stock on February 1, 2012 upon conversion of shares of the Issuer's convertible preferred stock. The Fund acquired 600,000 shares of Common Stock in connection with the Issuer's IPO for a purchase price of \$10 per share.

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.**Second Amended and Restated Investors' Rights Agreement**

The Reporting Persons and certain other stockholders (collectively, the "Holders") of the Issuer have entered into a Second Amended and Restated Investors' Rights Agreement dated November 1, 2011 (the "Investors' Rights Agreement") with the Issuer. Subject to the terms of the Investors' Rights Agreement, holders of shares having registration rights ("Registrable Securities") can demand that the Issuer file a registration statement or request that their shares be covered by a registration statement that the Issuer is otherwise filing.

Demand Registration Rights

If, at any time after June 24, 2012, the Issuer shall receive a written request from the Holders (as defined in the Investors' Rights Agreement) of at least a majority of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed \$5,000,000) (the "Initiating Holders") that the Issuer file a Form S-1 registration statement under the Securities Act of 1933 (the "Securities Act"), then the Issuer shall (i) within ten (10) days after the date such request is given, give notice thereof (the "Demand Notice") to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders.

The Issuer shall not be obligated to effect, or to take any action to effect, any demand registration if the Issuer has effected two Form S-1 demand registrations.

Piggyback Registration Rights

If the Issuer proposes to register any of its stock in connection with the public offering of such securities by the Issuer or on behalf of selling stockholders, the Issuer shall, at such time, promptly give each Holder written notice of such registration. Upon the written request of each Holder, the Issuer shall, subject to the certain limitations, use its reasonable best efforts to cause to be registered all of the Registrable Securities that each such Holder has requested to be registered.

Form S-3 Demand Registration Rights

If at any time when it is eligible to use a Form S-3 registration statement, the Issuer receives a request from Holders of at least thirty percent (30%) of the Registrable Securities then outstanding that the Issuer file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least \$1,000,000, then the Issuer shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders.

The Issuer shall not be obligated to effect, or to take any action to effect, any Form S-3 demand registration if the Issuer has effected two Form S-3 demand registrations within the twelve month period immediately preceding the date of such request.

Registration Expenses

Subject to certain limitations, the Issuer will pay all expenses incurred in connection with the exercise of demand and piggyback registration rights, except for underwriting discounts and commissions.

Indemnification

The Investor Rights Agreement contains customary cross-indemnification provisions, pursuant to which the Issuer is obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to the Issuer, and the selling stockholders are obligated to indemnify the Issuer for material misstatements or omissions attributable to them.

Expiration of Registration Rights

No Holder shall be entitled to exercise any registration rights after the earlier of: (i) the closing of a Deemed Liquidation Event (as such term is defined in the Issuer's Certificate of Incorporation); and (ii) the fifth anniversary of the Issuer's completion of the IPO.

Holders of all of the Issuer's shares with these registration rights signed agreements with the underwriters prohibiting the exercise of their registration rights for 180 days or 360 days, as applicable, subject to a possible extension beyond the end of such 180-day or 360-day period, as applicable, following the date of the completion of the Issuer's IPO.

Lock-up Agreements

The Fund, Westphal, Aldrich and Dipp, along with the Issuer's officers and directors and holders of all of its outstanding securities have agreed that they will not offer, sell, contract to sell, pledge or otherwise dispose of,

directly or indirectly, any shares of the Issuer's Common Stock, enter into a transaction that would have the same effect, or enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of the Issuer's Common Stock, whether any of these transactions are to be settled by delivery of the Issuer's Common Stock or other securities, in cash or otherwise, or publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement, without, in each case, the prior written consent of the representatives of the underwriters for a period of 180 days or 360 days, as applicable, after February 1, 2012, except for transfers of shares of its Common Stock to a family member or trust, provided the transferee agrees to be bound in writing by the terms of the lock-up prior to such transfer, such transfer does not involve a disposition for value and no filing by any party (donor, donee, transferor or transferee) under the Exchange Act be required or be voluntarily made in connection with such transfer (other than a filing on a Form 5 made after the expiration of the lock-up period).

The 180-day or 360-day restricted period under the agreements with the underwriters described above will be automatically extended if: (1) during the period that begins on the date that is 15 calendar days plus 3 business days before the last day of the 180-day or 360-day restricted period and ends on the last day of the 180-day or 360-day restricted period, the Issuer issues an earnings release or material news or a material event relating to the Issuer occurs; or (2) prior to the expiration of the 180-day or 360-day restricted period, the Issuer announces that it will release earnings results or becomes aware that material news or a material event relating to the Issuer will occur during the 16-day period beginning on the last day of the 180-day or 360-day restricted period, in which case the restrictions described in the preceding paragraph will continue to apply until the date that is 15 calendar days plus 3 business days after the date of the issuance of the earnings release or the occurrence of the material news or material event.

The foregoing description of the terms of the Investor Rights' Agreement and the Lock-up Agreement is intended as a summary only and is qualified in its entirety by reference to the Investor Rights' Agreement and Form of Lock-up Agreement, which are filed as exhibits to this Schedule 13D and incorporated by reference herein.

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

Item 7. Material to be Filed as Exhibits.

The following documents are filed as Exhibits to this statement:

Exhibit Number	Exhibit Description
99.1	Joint Filing Agreement
99.2	Second Amended and Restated Investors' Rights Agreement dated as of November 1, 2011, among the Issuer and the Issuer's securityholders listed therein (Incorporated by reference to Exhibit 4.2 of the Issuer's Registration Statement of Form S-1 (SEC File No. 333-177677), filed with the Securities and Exchange Commission (the " <u>SEC</u> ") on November 3, 2011).
99.3	Form of Lock-up Agreement

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, we certify that the information set forth in this statement is true, complete and correct. We also hereby agree to file this statement jointly pursuant to the Agreement listed on Exhibit 99.1 hereto.

Dated: February 14, 2012

LONGWOOD FUND, L.P.

By: Longwood Fund GP, LLC, a
Delaware limited liability company and
general partner of Longwood Fund, L.P.

By: /s/ Christoph Westphal
Christoph Westphal, Manager

LONGWOOD FUND GP, LLC

By: /s/ Christoph Westphal
Christoph Westphal, Manager

/s/ Christoph Westphal
Christoph Westphal, M.D., Ph.D.

/s/ Richard Aldrich
Richard Aldrich

/s/ Michelle Dipp
Michelle Dipp, M.D., Ph.D.

ATTACHMENT A

Each Reporting Person disclaims beneficial ownership of the shares described above except to the extent of his or its pecuniary interest therein.

EXHIBIT 99.1

JOINT FILING AGREEMENT

The undersigned, being duly authorized thereunder, hereby execute this agreement as an exhibit to this Schedule 13D to evidence the agreement of the below-named parties, in accordance with the rules promulgated pursuant to the Securities Exchange Act of 1934, to file this Schedule jointly on behalf of each such party.

LONGWOOD FUND, L.P.

By: Longwood Fund GP, LLC, a
Delaware limited liability company and
general partner of Longwood Fund, L.P.

By: /s/ Christoph Westphal
Christoph Westphal, Manager

LONGWOOD FUND GP, LLC

By: /s/ Christoph Westphal
Christoph Westphal, Manager

/s/ Christoph Westphal
Christoph Westphal, M.D., Ph.D.

/s/ Richard Aldrich
Richard Aldrich

/s/ Michelle Dipp
Michelle Dipp, M.D., Ph.D.

Lock-Up Agreement

, 2011

UBS Securities LLC
Leerink Swann LLC

As representatives of the several Underwriters
named in Schedule A to the Underwriting Agreement
referred to herein

c/o UBS Securities LLC
299 Park Avenue
New York, New York 10171-0026

Ladies and Gentlemen:

This Lock-Up Agreement is being delivered to you in connection with the proposed Underwriting Agreement (the "Underwriting Agreement") to be entered into by Verastem, Inc., a Delaware corporation (the "Company"), and you and the other underwriters named in Schedule A to the Underwriting Agreement, with respect to the public offering (the "Offering") of common stock, par value \$.0001 per share, of the Company (the "Common Stock").

In order to induce you to enter into the Underwriting Agreement, the undersigned agrees that, for a period (the "Lock-Up Period") beginning on the date hereof and ending on, and including, the date that is 180 days after the date of the final prospectus relating to the Offering, the undersigned will not, without the prior written consent of UBS Securities LLC ("UBS") and Leerink Swann LLC ("Leerink"), (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission (the "Commission") promulgated thereunder (the "Exchange Act") with respect to, any Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, whether any such transaction is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (iii) publicly announce an intention to effect any transaction specified in clause (i) or (ii). The foregoing sentence shall not apply to (a) the registration of the offer and sale of Common Stock as contemplated by the Underwriting Agreement and the sale of the Common Stock to the Underwriters (as defined in the Underwriting Agreement) in the Offering; (b) bona fide gifts, provided the recipient thereof

agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement; (c) dispositions to any trust for the direct or indirect benefit of the undersigned and/or the immediate family of the undersigned, provided that such trust agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement; (d) dispositions to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the undersigned and/or the immediate family of the undersigned, provided that such entity agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement; (e) dispositions by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned, provided the recipient thereof agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement; (f) distributions to partners, members or stockholders of the undersigned, provided that each distributee agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement; (g) the exercise of options to purchase Common Stock outstanding as of the date hereof or granted under equity incentive plans in effect as of the date hereof or described in the registration statement filed with the Commission with respect to the Offering, provided that the underlying Common Stock continues to be subject to the terms of this Lock-Up Agreement and that no filing under the Exchange Act reporting a disposition of Common Stock to satisfy the exercise price and/or tax withholding obligations shall be required or shall be voluntarily made in connection with such exercise; (h) the repurchase of Common Stock by the Company in connection with termination of the undersigned's employment with the Company; (i) the entry into any trading plan established pursuant to Rule 10b5-1 under the Exchange Act, provided that such plan does not provide for any sales or other dispositions of Common Stock during the Lock-Up Period and no public announcement or public disclosure of entry into such plan is made or required to be made; or (j) transactions relating to Common Stock acquired in open market transactions after the completion of the Offering, provided that no filing under the Exchange Act reporting a reduction in beneficial ownership of Common Stock by the undersigned shall be required or shall be voluntarily made in connection with such transactions. For purposes of this paragraph, "immediate family" shall mean the undersigned and the spouse, any lineal descendent, father, mother, brother, sister, nephew or niece of the undersigned.

If the undersigned is an officer or director of the Company, the undersigned further agrees that all of the foregoing provisions shall be equally applicable to any issuer-directed shares of Common Stock that the undersigned may purchase in the offering.

In addition, the undersigned hereby waives any rights the undersigned may have to require registration of Common Stock in connection with the filing of a registration statement relating to the Offering. The undersigned further agrees that, for the Lock-Up Period, the undersigned will not, without the prior written consent of UBS and Leerink, make any demand for, or exercise any right with respect to, the registration of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or warrants or other rights to purchase Common Stock or any such securities.

Notwithstanding the above, if (a) during the period that begins on the date that is fifteen (15) calendar days plus three (3) business days before the last day of the Lock-Up Period and ends on the last day of the Lock-Up Period, the Company issues an earnings release or material news or a material event relating to the Company occurs; or (b) prior to the expiration of

the Lock-Up Period, the Company announces that it will release earnings results during the sixteen (16) day period beginning on the last day of the Lock-Up Period, then the restrictions imposed by this Lock-Up Agreement shall continue to apply until the expiration of the date that is fifteen (15) calendar days plus three (3) business days after the date on which the issuance of the earnings release or the material news or material event occurs.

In addition, the undersigned hereby waives any and all preemptive rights, participation rights, resale rights, rights of first refusal and similar rights that the undersigned may have in connection with the Offering or with any issuance or sale by the Company of any equity or other securities before the Offering, except for any such rights as have been heretofore duly exercised.

If the undersigned is an officer or director of the Company, (i) UBS and Leerink agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Common Stock, UBS and Leerink will notify the Company of the impending release or waiver, and (ii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by UBS and Leerink hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

The undersigned hereby confirms that the undersigned has not, directly or indirectly, taken, and hereby covenants that the undersigned will not, directly or indirectly, take, any action designed, or which has constituted or will constitute or might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of shares of Common Stock.

The undersigned hereby authorizes the Company and its transfer agent, during the Lock-Up Period, to decline the transfer of or to note stop transfer restrictions on the stock register and other records relating to shares of Common Stock or other securities subject to this Lock-Up Agreement of which the undersigned is the record holder, and, with respect to shares of Common Stock or other securities subject to this Lock-Up Agreement of which the undersigned is the beneficial owner but not the record holder, the undersigned hereby agrees to cause such record holder to authorize the Company and its transfer agent, during the Lock-Up Period, to decline the transfer of or to note stop transfer restrictions on the stock register and other records relating to such shares or other securities.

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If (i) the Company notifies you in writing that it does not intend to proceed with the Offering, (ii) the registration statement filed with the Commission with respect to the Offering is withdrawn, (iii) the Underwriting Agreement does not become effective on or prior to June 30, 2012 or (iv) for any reason the Underwriting Agreement shall be terminated prior to the "time of purchase" (as defined in the Underwriting Agreement), this Lock-Up Agreement shall be terminated and the undersigned shall be released from its obligations hereunder.

Yours very truly,

Name: