

ATHERSYS, INC / NEW  
Form SC 13G/A  
February 17, 2009

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

SCHEDULE 13G  
Under the Securities Exchange Act of 1934

(Amendment No. 1)\*

Athersys, Inc.

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(Name of Issuer)

Common Stock, par value \$0.001 per share

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(Title of Class of Securities)

04744L106

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(CUSIP Number)

December 31, 2008

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(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)  
 Rule 13d-1(c)  
 Rule 13d-1(d)

\*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 the disclosures provided in a prior cover page.

The information required in 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).

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
RA Capital Management, LLC
  2. Check the Appropriate Box if a Member of a Group (See Instructions)
    - (a)
    - (b)
  3. SEC Use Only
  4. Citizenship or Place of Organization      Massachusetts
- |  |    |                          |         |
|--|----|--------------------------|---------|
| Number of<br>Shares<br>Beneficially<br>Owned by<br>Each Reporting<br>Person With | 5. | Sole Voting Power        | 300,000 |
|  | 6. | Shared Voting Power      | 0       |
|  | 7. | Sole Dispositive Power   | 300,000 |
|  | 8. | Shared Dispositive Power | 0       |
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
300,000
  10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
  11. Percent of Class Represented by Amount in Row (9)  
1.5%
  12. Type of Reporting Person (See Instructions)  
IA
-

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
Peter Kolchinsky
  2. Check the Appropriate Box if a Member of a Group (See Instructions)
    - (a)
    - (b)
  3. SEC Use Only
  4. Citizenship or Place of Organization      United States
- |  |    |                          |         |
|--|----|--------------------------|---------|
| Number of<br>Shares<br>Beneficially<br>Owned by<br>Each Reporting<br>Person With | 5. | Sole Voting Power        | 300,000 |
|  | 6. | Shared Voting Power      | 0       |
|  | 7. | Sole Dispositive Power   | 300,000 |
|  | 8. | Shared Dispositive Power | 0       |
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
300,000
  10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
  11. Percent of Class Represented by Amount in Row (9)  
1.5%
  12. Type of Reporting Person (See Instructions)  
IN
-

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
RA Capital Healthcare Fund, L.P.
  2. Check the Appropriate Box if a Member of a Group (See Instructions)
    - (a)
    - (b)
  3. SEC Use Only
  4. Citizenship or Place of Organization Delaware
- |  |    |                          |         |
|--|----|--------------------------|---------|
| Number of<br>Shares<br>Beneficially<br>Owned by<br>Each Reporting<br>Person With | 5. | Sole Voting Power        | 294,720 |
|  | 6. | Shared Voting Power      | 0       |
|  | 7. | Sole Dispositive Power   | 294,720 |
|  | 8. | Shared Dispositive Power | 0       |
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
294,720
  10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
  11. Percent of Class Represented by Amount in Row (9)  
1.5%
  12. Type of Reporting Person (See Instructions)  
PN
-

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
RA Capital Healthcare Fund II, L.P.
  2. Check the Appropriate Box if a Member of a Group (See Instructions)
    - (a)
    - (b)
  3. SEC Use Only
  4. Citizenship or Place of Organization      Delaware
- |  |    |                          |       |
|--|----|--------------------------|-------|
| Number of<br>Shares<br>Beneficially<br>Owned by<br>Each Reporting<br>Person With | 5. | Sole Voting Power        | 5,280 |
|  | 6. | Shared Voting Power      | 0     |
|  | 7. | Sole Dispositive Power   | 5,280 |
|  | 8. | Shared Dispositive Power | 0     |
9. Aggregate Amount Beneficially Owned by Each Reporting Person  
5,280
  10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
  11. Percent of Class Represented by Amount in Row (9)  
0.0%
  12. Type of Reporting Person (See Instructions)  
PN
-

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## Item 1.

- (a) Name of Issuer: Athersys, Inc. (the "Issuer").
- (b) Address of the Issuer's Principal Executive Offices: 3201 Carnegie Avenue, Cleveland, Ohio 44115.

## Item 2.

(a) Name of Person Filing: This joint statement on Schedule 13G is being filed by Peter Kolchinsky, RA Capital Management, LLC, RA Capital Healthcare Fund, L.P. and RA Capital Healthcare Fund II, L.P., who are collectively referred to herein as the "Reporting Persons." Mr. Kolchinsky (the "Manager") is the manager of RA Capital Management, LLC ("Capital"), which is the investment adviser and sole general partner of each of RA Capital Healthcare Fund, L.P. ("Fund I") and RA Capital Healthcare Fund II, L.P. ("Fund II"). The Reporting Persons have entered into a Joint Filing Agreement, dated as of the date hereof, a copy of which is filed with this Schedule 13G as Exhibit 1 (which is incorporated herein by reference), pursuant to which the Reporting Persons have agreed to file this statement jointly in accordance with the provisions of Rule 13d-1(k) under the Act.

(b) Address of Principal Business Office: The principal business office of the Reporting Persons with respect to the shares reported hereunder is 800 Boylston Street, Suite 1500, Boston, MA 02199.

(c) Citizenship: Capital is a Massachusetts limited liability company. Each of Fund I and Fund II is a Delaware limited partnership. The Manager is a United States citizen.

(d) Title and Class of Securities: Common stock, par value \$0.001 per share ("Common Stock").

(e) CUSIP Number: 04744L106.

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

Not applicable.

Item 4. Ownership:

In the aggregate, the Reporting Persons beneficially own 300,000 shares of the Common Stock of the Issuer, which represents the number of shares of Common Stock the Reporting Persons have the right to acquire within 60 days of this filing through the exercise of warrants dated June 8, 2007 issued to each of Fund I and Fund II, representing approximately 1.5% of such class of securities. The beneficial ownership of each Reporting Person is as follows: (i) Fund I beneficially owns 294,720 shares of Common Stock, which represents the number of shares of Common Stock Fund I has the right to acquire within 60 days of this filing through the exercise of a warrant issued to Fund I, representing approximately 1.5% of the class, (ii) Fund II beneficially owns 5,280 shares of Common Stock, which represents the number of shares of Common Stock Fund II has the right to acquire within 60 days of this filing through the exercise of a warrant issued to Fund II, representing approximately 0.0% of the class and (iii) Capital, as the investment adviser and sole general partner of each of Fund I and Fund II, and Mr. Kolchinsky as the manager of Capital, each beneficially owns 300,000 shares of Common Stock of the Issuer, which amount represents the aggregate number of shares of Common Stock Fund I and Fund II have the right to acquire within 60 days of this

filing through the exercise of the warrants issued to each of Fund I and Fund II, representing approximately 1.5% of the class. The percentage of the Common Stock beneficially owned by each Reporting Person is based on a total of 19,227,988 shares of Common Stock of the Issuer outstanding as of November 1, 2008, as reported in the Issuer's most recent annual report on Form 10-K for the fiscal period ended September 30, 2008, plus the number of shares of Common Stock able to be acquired by the Reporting Person within 60 days of this filing.

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Each Each of Fund I and Fund II has the power to vote and dispose of the shares of Common Stock beneficially owned by such entity (as described above). Capital, as the investment adviser and sole general partner of each of Fund I and Fund II, has the sole authority to vote and dispose of all of the shares of Common Stock reported in this Schedule 13G. The Manager, by virtue of his position as manager of Capital, has the sole authority to vote and dispose of all of the shares of Common Stock reported in this Schedule 13G.

Item 5. Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following [x].

Item 6. Ownership of More than Five Percent on Behalf of Another Person:

Not applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person:

Not applicable.

Item 8. Identification and Classification of Members of the Group:

Not applicable.

Item 9. Notice of Dissolution of Group:

Not applicable.

Item 10. Certification:

By signing below I hereby certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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Signature

Signature

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

DATE: February 13, 2009

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Management, LLC  
General Partner

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

RA CAPITAL HEALTHCARE FUND II, L.P.

By: RA Capital Management, LLC  
General Partner

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

RA CAPITAL MANAGEMENT, LLC

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

PETER KOLCHINSKY

/s/ Peter Kolchinsky  
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Exhibit 1

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agrees, as of February 13, 2009, that only one statement containing the information required by Schedule 13G, and each amendment thereto, need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of Athersys, Inc., and such statement to which this Joint Filing Agreement is attached as Exhibit 1 is filed on behalf of each of the undersigned. This Agreement expressly supersedes the Joint Filing Agreement dated April 14, 2008 among the certain of the parties hereto with respect to the filing of information required by Schedule 13G in relation to Common Stock of the Issuer.

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Management, LLC  
General Partner

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

RA CAPITAL HEALTHCARE FUND II, L.P.

By: RA Capital Management, LLC  
General Partner

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

RA CAPITAL MANAGEMENT, LLC

By: /s/ Peter Kolchinsky

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Peter Kolchinsky  
Manager

PETER KOLCHINSKY

/s/ Peter Kolchinsky

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