

REPLIDYNE INC  
Form SC 13G/A  
February 14, 2007

**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**SCHEDULE 13G**  
**(Amendment No. 1)**

Under the Securities Exchange Act of 1934

Replidyne, Inc.  
(Name of Issuer)

Common Stock, \$0.001 par value  
(Title of Class of Securities)

76028W107  
(CUSIP Number)

December 31, 2006  
(Date of Event Which Requires Filing of this Statement)

Check the following box to designate the rule pursuant to which the 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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CUSIP No. 709754105

1. **Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only)**  
 D. E. Shaw Meniscus Portfolios, L.L.C.  
 51-0481096

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  
 Shares  
 Beneficially  
 Owned by  
 Each  
 Reporting  
 Person With**

5. **Sole Voting Power**

-0-

6. **Shared Voting Power**  
 1,471,761

7. **Sole Dispositive Power**  
 -0-

8. **Shared Dispositive Power**  
 1,471,761

9. **Aggregate Amount Beneficially Owned by Each Reporting Person**  
 1,471,761

10. **Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)**

11. **Percent of Class Represented by Amount in Row (9)**  
 5.5%

12. **Type of Reporting Person (See Instructions)**  
 OO

CUSIP No. 709754105

1. **Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only)**  
 D. E. Shaw & Co., L.L.C.  
 13-3799946

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  
 Shares  
 Beneficially  
 Owned by  
 Each  
 Reporting  
 Person With

5. **Sole Voting Power**

-0-

6. **Shared Voting Power**  
 1,471,761

7. **Sole Dispositive Power**  
 -0-

8. **Shared Dispositive Power**  
 1,471,761

9. **Aggregate Amount Beneficially Owned by Each Reporting Person**  
 1,471,761

10. **Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)**

11. **Percent of Class Represented by Amount in Row (9)**  
 5.5%

12. **Type of Reporting Person (See Instructions)**  
 OO

CUSIP No. 76028W107

1. **Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only)**  
 D. E. Shaw & Co., L.P.  
 13-3695715

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  
 Shares  
 Beneficially  
 Owned by  
 Each  
 Reporting  
 Person With**

5. **Sole Voting Power**

-0-

6. **Shared Voting Power**  
 1,624,301

7. **Sole Dispositive Power**  
 -0-

8. **Shared Dispositive Power**  
 1,624,301

9. **Aggregate Amount Beneficially Owned by Each Reporting Person**  
 1,624,301

10. **Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)**

11. **Percent of Class Represented by Amount in Row (9)**  
 6.0%

12. **Type of Reporting Person (See Instructions)**  
 IA, PN

CUSIP No. 76028W107

**1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only)**

David E. Shaw

**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  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With**

**5. Sole Voting Power**

-0-

**6. Shared Voting Power**

1,624,301

**7. Sole Dispositive Power**

-0-

**8. Shared Dispositive Power**

1,624,301

**9. Aggregate Amount Beneficially Owned by Each Reporting Person**

1,624,301

**10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)**

**11. Percent of Class Represented by Amount in Row (9)**

6.0%

**12. Type of Reporting Person (See Instructions)**

IN

**Item 1.**

- (a) **Name of Issuer**  
Replidyne, Inc.
- (b) **Address of Issuer's Principal Executive Offices**  
1450 Infinite Drive  
Louisville, CO 80027

**Item 2.**

- (a) **Name of Person Filing**  
D. E. Shaw Meniscus Portfolios, L.L.C.  
D. E. Shaw & Co., L.L.C.  
D. E. Shaw & Co., L.P.  
David E. Shaw
- (b) **Address of Principal Business Office or, if none, Residence**  
The business address for each reporting person is:  
120 W. 45<sup>th</sup> Street, Tower 45, 39<sup>th</sup> Floor  
New York, NY 10036
- (c) **Citizenship**  
D. E. Shaw Meniscus Portfolios, L.L.C. is a limited liability company organized under the laws of the state of Delaware.  
D. E. Shaw & Co., L.L.C. is a limited liability company organized under the laws of the state of Delaware.  
D. E. Shaw & Co., L.P. is a limited partnership organized under the laws of the state of Delaware.  
David E. Shaw is a citizen of the United States of America.
- (d) **Title of Class of Securities**  
Common Stock, \$0.001 par value
- (e) **CUSIP Number**  
76028W107

**Item 3. If this statement is filed pursuant to Rule 13d-1(b) or 13d-2(b) or (c), check whether the person filing is a:**

Not applicable

**Item 4. Ownership.**

As of December 31, 2006:

(a) Amount beneficially owned:

D. E. Shaw Meniscus Portfolios, L.L.C.:	1,471,761 shares
D. E. Shaw & Co., L.L.C.:	1,471,761 shares

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This is composed of 1,471,761 shares in the name of D. E. Shaw Meniscus Portfolios, L.L.C.

D. E. Shaw & Co., L.P.:

1,624,301 shares

This is composed of (i) 1,471,761 shares in the name of D. E. Shaw Meniscus Portfolios, L.L.C. and (ii) 152,540 shares in the name of D. E. Shaw Valence Portfolios, L.L.C.

David E. Shaw:

1,624,301 shares

This is composed of (i) 1,471,761 shares in the name of D. E. Shaw Meniscus Portfolios, L.L.C. and (ii) 152,540 shares in the name of D. E. Shaw Valence Portfolios, L.L.C.

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(b) Percent of class:

D. E. Shaw Meniscus Portfolios, L.L.C.:	5.5%
D. E. Shaw & Co., L.L.C.:	5.5%
D. E. Shaw & Co., L.P.:	6.0%
David E. Shaw:	6.0%

(c) Number of shares to which the person has:

(i) Sole power to vote or to direct the vote:

D. E. Shaw Meniscus Portfolios, L.L.C.:	-0- shares
D. E. Shaw & Co., L.L.C.:	-0- shares
D. E. Shaw & Co., L.P.:	-0- shares
David E. Shaw:	-0- shares

(ii) Shared power to vote or to direct the vote:

D. E. Shaw Meniscus Portfolios, L.L.C.:	1,471,761 shares
D. E. Shaw & Co., L.L.C.:	1,471,761 shares
D. E. Shaw & Co., L.P.:	1,624,301 shares
David E. Shaw:	1,624,301 shares

(iii) Sole power to dispose or to direct the disposition of:

D. E. Shaw Meniscus Portfolios, L.L.C.:	-0- shares
D. E. Shaw & Co., L.L.C.:	-0- shares
D. E. Shaw & Co., L.P.:	-0- shares
David E. Shaw:	-0- shares

(iv) Shared power to dispose or to direct the disposition of:

D. E. Shaw Meniscus Portfolios, L.L.C.:	1,471,761 shares
D. E. Shaw & Co., L.L.C.:	1,471,761 shares
D. E. Shaw & Co., L.P.:	1,624,301 shares
David E. Shaw:	1,624,301 shares

David E. Shaw does not own any shares directly. By virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co., Inc., which is the general partner of D. E. Shaw & Co., L.P., which in turn is the managing member and investment adviser of D. E. Shaw Valence Portfolios, L.L.C. and the investment adviser of D. E. Shaw Meniscus Portfolios, L.L.C., and by virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co. II, Inc., which is the managing member of D. E. Shaw & Co., L.L.C., which in turn is the managing member of D. E. Shaw Meniscus Portfolios, L.L.C., David E. Shaw may be deemed to have the shared power to vote or direct the vote of, and the shared power to dispose or direct the disposition of, the 1,624,301 shares as described above constituting 6.0% of the outstanding shares and, therefore, David E. Shaw may be deemed to be the beneficial owner of such shares. David E. Shaw disclaims beneficial ownership of such 1,624,301 shares.

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

Not applicable

**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, each of D. E. Shaw Meniscus Portfolios, L.L.C., D. E. Shaw & Co., L.L.C., D. E. Shaw & Co., L.P., and David E. Shaw certify that, to the best of such reporting person's 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 such purposes or effect.

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**SIGNATURE**

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct. Powers of Attorney, dated February 24, 2004, granted by David E. Shaw in favor of Anne Dinning, are attached hereto.

Dated: February 14, 2007

D. E. Shaw Meniscus Portfolios, L.L.C.

By: D. E. Shaw & Co., L.L.C., as  
managing member

By: /s/ Anne Dinning

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Anne Dinning  
Managing Director

D. E. Shaw & Co., L.L.C.

By: /s/ Anne Dinning

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Anne Dinning  
Managing Director

D. E. Shaw & Co., L.P.

By: /s/ Anne Dinning

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Anne Dinning  
Managing Director

David E. Shaw

By: /s/ Anne Dinning

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Anne Dinning  
Attorney-in-Fact for David E. Shaw