

REPLIDYNE INC  
Form SC 13G  
February 02, 2007

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934**

(Amendment No.   )\*

**Replidyne, Inc.**

(Name of Issuer)

**Common Stock, \$.001 par value per share**

(Title of Class of Securities)

**76028W107**

(CUSIP Number)

**December 31, 2006**

(Date of Event which Requires Filing of this Statement)

Edgar Filing: REPLIDYNE INC - Form SC 13G

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 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**HealthCare Ventures VI, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **3,612,362**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**3,612,362**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**3,612,362**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**13.41%**

12 TYPE OF REPORTING PERSON\*

**PN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**HealthCare Partners VI, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **3,612,362**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**3,612,362**

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**3,612,362**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**13.41%**

12 TYPE OF REPORTING PERSON\*

**PN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**HealthCare Ventures VIII, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **746,707**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**746,707**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**746,707**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**2.77%**

12 TYPE OF REPORTING PERSON\*

**PN**

---



1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**HealthCare Partners VIII, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **746,707**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**746,707**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**746,707**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**2.77%**

12 TYPE OF REPORTING PERSON\*

**PN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**HealthCare Partners VIII, LLC**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **746,707**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**746,707**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**746,707**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**2.77%**

12 TYPE OF REPORTING PERSON\*

**00**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**James H. Cavanaugh, Ph.D.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **4,359,069**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,359,069**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.18%**

12 TYPE OF REPORTING PERSON\*

**IN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**Christopher Mirabelli, Ph.D.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

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**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **4,359,069**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,359,069**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.18%**

12 TYPE OF REPORTING PERSON\*

**IN**

---



1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**Harold R. Werner**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **4,359,069**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,359,069**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.18%**

12 TYPE OF REPORTING PERSON\*

**IN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**John W. Littlechild**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **4,359,069**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,359,069**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.18%**

12 TYPE OF REPORTING PERSON\*

**IN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**William Crouse**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **3,612,362**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**3,612,362**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**3,612,362**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**13.41%**

12 TYPE OF REPORTING PERSON\*

**IN**

---

1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**Eric Aguiar, Ph.D.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF  
SHARES**

6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY  
EACH**

7 **4,359,069**  
SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON  
WITH**

8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,359,069**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.18%**

12 TYPE OF REPORTING PERSON\*

**IN**

---



1 NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

**Augustine Lawlor**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**United States**

5 SOLE VOTING POWER

**NUMBER OF** 16,313

**SHARES** 6 SHARED VOTING POWER

**BENEFICIALLY**

**OWNED BY** 4,359,069

**EACH** 7 SOLE DISPOSITIVE POWER

**REPORTING**

**PERSON** 16,313

**WITH** 8 SHARED DISPOSITIVE POWER

**4,359,069**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**4,375,382**

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**16.23%**

12 TYPE OF REPORTING PERSON\*

**IN**

---

**Item 1.**

(a)

Name of Issuer

**Replidyne, Inc.**

(b)

Address of Issuer's Principal Executive Offices

**1450 Infinite Drive**

**Louisville, Colorado 80027**

**Item 2.**

(a)

Name of Person Filing

**HealthCare Ventures VI, L.P. ( HCVVI )**

**HealthCare Partners VI, L.P. ( HCPVI )**

**HealthCare Ventures VIII, L.P. ( HCVVIII )**

**HealthCare Partners VIII, L.P. ( HCPVIII )**

**HealthCare Partners VIII, LLC ( HCP VIII LLC )**

**James H. Cavanaugh, Ph.D. ( Cavanaugh )**

**Christopher Mirabelli, Ph.D. ( Mirabelli )**

**Harold R. Werner ( Werner )**

**John W. Littlechild ( Littlechild )**

**William Crouse ( Crouse )**

**Augustine Lawlor ( Lawlor )**

**Eric Aguiar, Ph.D. ( Aguiar )**

See attached Exhibit A, which is a copy of their agreement in writing to file this statement on behalf of each of them. <sup>1</sup>

(b)

Address of Principal Business Office or, if none, Residence

**The business address for HCVVI, HCPVI, HCVVIII, HCPVIII, HCP VIII LLC, Dr. Cavanaugh and Messrs. Werner and Crouse is 44 Nassau Street, Princeton, New Jersey 08542. The business address for Drs. Mirabelli and Aguiar and Messrs. Littlechild and Lawlor is 55 Cambridge Parkway, Cambridge, Massachusetts 02142,**

(c)

Citizenship

**HCVVI, HCPVI, HCVVIII and HCPVIII are limited partnerships organized under the laws of the State of Delaware. HCP VIII LLC is a limited liability company organized under the laws of the State of Delaware. Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild, Crouse and Lawlor are each United States citizens.**

1

Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild, Crouse and Lawlor are General Partners of HCPVI. HCPVI is the General Partner of HCVVI, the record holder of the securities. Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild and Lawlor are the Managing Directors of HCP VIII LLC. HCP VIII LLC is

the General Partner of HCPVIII, which is the General Partner of HCVVIII, the record holder of the securities.

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(d)

Title of Class of Securities

**Common Stock, \$.001 par value per share (the Common Stock )**

(e)

CUSIP Number

**76028W107**

**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.**

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);

- (g) A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) Group, in accordance with §240.13d-1(b)(1)(ii)(J).

**Item 4.**

**Ownership.**

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a)

Amount beneficially owned:

**As of December 31, 2006: HCVVI and HCPVI beneficially owned 3,612,362 shares of the Issuer's Common Stock; HCVVIII, HCPVIII, and HCP VIII LLC beneficially owned 746,707 shares of the Issuer's Common Stock; Each of Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner and Littlechild beneficially owned the 4,359,069 shares of the Issuer's Common Stock owned by each of HCVVI and HCVVIII; Crouse beneficially owned the 3,612,362 shares of the Issuer's Common Stock owned by HCVVI; and Mr. Lawlor beneficially owned 4,375,382 shares of the Issuer's Common Stock which includes (i) an aggregate of 4,359,069 shares beneficially owned by HCVVI and HCVVIII; and (ii) immediately exercisable options to purchase 16,313 shares of the Issuer's Common Stock.**

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(b)

Percent of class: (Taking into consideration that 26,935,680 shares are issued and outstanding as of October 31, 2006 as reported in the Issuer's Form 10-Q filed with the Securities and Exchange Commission on November 9, 2006 for the period ended September 30, 2006)

**As of December 31, 2006: The 3,612,362 shares of Common Stock beneficially owned by HCVVI and HCPVI constituted 13.41% of the shares outstanding; the 746,707 shares of Common Stock beneficially owned by HCVVIII, HCPVIII and HCP VIII LLC constituted 2.77% of the shares outstanding; the 4,359,069 shares of Common Stock beneficially owned by Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner and Littlechild constituted 16.18% of the shares outstanding; the 3,612,362 shares of Common Stock beneficially owned by Crouse constituted 13.41% of the shares outstanding; and the 4,375,382 shares of Common Stock beneficially owned by Mr. Lawlor constituted 16.23% of the shares outstanding.**

(c)

Number of shares as to which the person has:

(i)

Sole power to vote or to direct the vote **Mr. Lawlor has the sole power to vote or direct the vote as to the 16,313 shares beneficially owned by him.**

(ii)

Shared power to vote or to direct the vote

**HCVVI, HCPVI, Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild, Crouse and Lawlor share the power to vote or direct the vote of those shares owned by HCVVI.**



**HCVVIII, HCPVIII, HCP VIII LLC, Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild and Lawlor share the power to vote or direct the vote of those shares owned by HCVVIII.**

(iii)

Sole power to dispose or to direct the disposition of **Mr. Lawlor has the sole power to dispose of or direct the disposition of the 16,313 shares beneficially owned by him.**

(iv)

Shared power to dispose or to direct the disposition of

**HCVVI, HCPVI, Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild, Crouse and Lawlor share the power to dispose of or direct the disposition of those shares owned by HCVVI.**

**HCVVIII, HCPVIII, HCP VIII LLC, Drs. Cavanaugh, Mirabelli and Aguiar and Messrs. Werner, Littlechild and Lawlor share the power to dispose of or direct the disposition of those shares owned by HCVVIII.**

*Instruction.* For computations regarding securities which represent a right to acquire an underlying security see §240.13d-3(d)(1).

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**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 five percent of the class of securities, check the following [ ].

**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.**

**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**

**Not Applicable.**

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**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.

February 1, 2007

HealthCare Ventures VI, L.P.

By: its General Partner, HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Ventures VIII, L.P.

By: its General Partner, HealthCare Partners VIII, L.P.

By: its General Partner, HealthCare Partners VIII, LLC

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VIII, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VIII, LLC

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By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007 /s/Jeffery Steinberg, Attorney-in-Fact  
James H. Cavanaugh, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Christopher Mirabelli, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Harold R. Werner

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
John W. Littlechild

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Augustine Lawlor

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Eric Aguiar, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
William Crouse

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**EXHIBIT A**

**AGREEMENT**

**JOINT FILING OF SCHEDULE 13G**

The undersigned hereby agree to jointly prepare and file with regulatory authorities a Schedule 13G and any future amendments thereto reporting each of the undersigned's ownership of securities of Replidyne, Inc. and hereby affirm that such Schedule 13G is being filed on behalf of each of the undersigned.

February 1, 2007

HealthCare Ventures VI, L.P.

By: its General Partner, HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VI, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Ventures VIII, L.P.

By: its General Partner, HealthCare Partners VIII, L.P.

By: its General Partner, HealthCare Partners VIII, LLC

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VIII, L.P.

By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007

HealthCare Partners VIII, LLC

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By: /s/Jeffrey Steinberg  
Jeffrey Steinberg, Administrative Partner

February 1, 2007 /s/Jeffery Steinberg, Attorney-in-Fact  
James H. Cavanaugh, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Christopher Mirabelli, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Harold R. Werner

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
John W. Littlechild

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Augustine Lawlor

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
Eric Aguiar, Ph.D.

February 1, 2007 /s/Jeffrey Steinberg, Attorney-in-Fact  
William Crouse