

Cardiovascular Systems Inc  
Form SC 13G/A  
March 17, 2009

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## SCHEDULE 13G

(Rule 13d-102)

Under the Securities Exchange Act of 1934

(Amendment No. 3)\*

### **CARDIOVASCULAR SYSTEMS, INC.** **(f/k/a Replidyne, Inc.)**

\_\_\_\_\_  
(Name of Issuer)

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

**14161906**  
(CUSIP Number)

**February 25, 2009**  
(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(d)
- Rule 13d-1(d)
- 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 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 NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

**Perseus-Soros BioPharmaceutical Fund, LP**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

**Delaware**

5 SOLE VOTING POWER

**148,780**

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON

6

SHARED VOTING POWER

**-0-**

7

SOLE DISPOSITIVE POWER

**148,780**

8

SHARED DISPOSITIVE POWER

**-0-**

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

**148,780**

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

11

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

**1.1%**

12 TYPE OF REPORTING PERSON

**PN**

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1 NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

**Perseus-Soros Partners, LLC**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)  O

(b)  X

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**Perseus BioTech Fund Partners, LLC**

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**Delaware**

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**SFM Participation, L.P.**

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(a)  O

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**Perseuspur, L.L.C.**

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12 TYPE OF REPORTING PERSON\*

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**Frank H. Pearl** (in the capacity described herein)

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**United States**

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CUSIP No. 14161906  
SCHEDULE 13G

Page 9 of 19 Pages

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**George Soros** (in the capacity described herein)

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