Thatcher Robert J
Form 3
December 29, 2008

FORM 3

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

OMB APPROVAL

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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
Â Thatcher Robert J
(Last) (First) (Middle)

651 CAMPUS DRIVE
(Street)

ST. PAUL,Â MNÂ 55112
(City) (State) (Zip)

2. Date of Event Requiring Statement (Month/Day/Year)
12/29/2008

3. Issuer Name **and** Ticker or Trading Symbol
CARDIOVASCULAR SYSTEMS INC [CSII]

4. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

_____ Director _____ 10% Owner
__X__ Officer (give title below) __X__ Other (specify below)
Executive VP / Mbr of 13(d) grp owng > 10%

5. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1.Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

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Table II - Derivative Securities Beneficially Owned (*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D) or Indirect (I)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			

						(Instr. 5)	
Series A-1 Conv Preferred Stock	Â (1)	Â (1)	Common Stock	12,378	$ (1)	D	Â
Stock Option (right to buy)	Â (2)	10/16/2010	Common Stock	100,000	$ 8	D	Â
Stock Option (right to buy)	Â (3)	12/18/2016	Common Stock	12,000	$ 5.71	D	Â
Stock Option (right to buy)	Â (4)	04/17/2017	Common Stock	46,000	$ 5.71	D	Â
Stock Option (right to buy)	Â (5)	08/06/2017	Common Stock	35,000	$ 5.11	D	Â
Stock Option (right to buy)	Â (6)	12/11/2017	Common Stock	50,000	$ 7.86	D	Â

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Thatcher Robert J 651 CAMPUS DRIVE ST. PAUL,Â MNÂ 55112	Â	Â	Â Executive VP	Mbr of 13(d) grp owng > 10%

Signatures

/s/ Carlye S. Landin as Attorney-in-Fact for Robert J. Thatcher pursuant to Power of Attorney filed herewith.	12/29/2008
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 5(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Each share of Series A-1 convertible preferred stock is convertible at any time, at the holder's election, into 1.03 shares of common stock and has no expiration date.

(2) Exercisable: 33,333 on 10/17/06 and 10/17/07; 33,334 on 10/17/2008.

(3) Exercisable: 4,000 on 12/19/07, 12/19/08 and 12/19/2009.

(4) Exercisable: 15,333 on 4/18/08 and 4/18/09; 15,334 on 4/18/10.

(5) Exercisable: 11,667 on 8/7/08 and 8/7/09; 11,666 on 8/7/10.

(6) Exercisable: 25,000 on the first anniversary of the closing of the Company's merger with Replidyne, Inc. and 25,000 on the second anniversary of the merger.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.
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