UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

SUNSHINE HEART, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

12988 Valley View Road Eden Prairie, Minnesota

(Address of Principal Executive Offices)

Sunshine Heart, Inc. Second Amended and Restated 2011 Equity Incentive Plan Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan Sunshine Heart, Inc. New-Hire Equity Incentive Plan (Full title of the plan)

> David A. Rosa Chief Executive Officer Sunshine Heart, Inc. 12988 Valley View Road

Eden Prairie, MN 55344 (952) 345-4200 (Name, address and telephone number, including area code, of agent for service)

Copy to:

Phillip D. Torrence, Esq. Honigman Miller Schwartz and Cohn LLP 350 East Michigan Avenue, Suite 300 Kalamazoo, MI 49007 (269) 337-7702

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o

Non-accelerated filer o (Do not check if a smaller reporting company) Smaller reporting company x

CALCULATION OF REGISTRATION FEE

		Proposed maximum		Proposed maximum		Amount of
	Amount to be		offering price	aggregate offering		registration
Title of securities to be registered	registered(1)		per share(2)	price(2)		fee
Common Stock, par value \$0.0001 per share	985,724	\$	4.045	\$ 3,987,253.58	\$	463.32
(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (th				er any additional shares of t		istrant's common

stock ("Common Stock") that become issuable under the Plans (as defined below) by reason of any stock dividend, stock split, recapitalization or any other similar transaction without receipt of consideration that results in an increase in the number of shares of the Registrant's outstanding Common Stock. Estimated solely for the purpose of calculating the registration fee pursuant to paragraphs (c) and (h) of Rule 457 under the Securities Act. The offering price per share and aggregate offering (2)

price are based upon the average of the high and low prices of the Common Stock as reported on the NASDAQ Capital Market on March 13, 2015, a date within five business days prior to the date of filing of this Registration Statement, for: (i) shares reserved for future grant pursuant to the Registrant's Second Amended and Restated 2011 Equity Incentive Plan (the **"2011 EIP"**); (ii) shares reserved for future grant pursuant to the Registrant's 2013 Non-Employee Directors' Equity Incentive Plan (the **"Directors' EIP"**); and (iii) shares reserved for future grant pursuant to the Registrant's New-Hire Equity Incentive Plan (the **"New-Hire Plan"**; and collectively, with the 2011 EIP and the Directors' EIP, the **"Plans"**).

		Offering Price				
Securities	Number of Shares	Per Share		Aggregate Offering Price		
Shares reserved for future grant under the 2011 EIP	604,058(3)	5 4.045	\$	2,443,414.61		
Shares reserved for future grant under the Directors' EIP	231,666(4)	5 4.045	\$	937,088.97		
Shares reserved for future grant under the New-Hire Plan	150,000(5) 5	6 4.045	\$	606,750.00		
Proposed Maximum Offering Price			\$	3,987,253,58		

The 604,058 shares consist of (i) 533,897 shares that were automatically added to the shares authorized for issuance under the 2011 EIP on January 1, 2015 pursuant to an "evergreen" provision contained in the 2011 EIP and (ii) 70,161 shares returned to the 2011 EIP share reserve as a result of shares being partially withheld by the Registrant to cover tax withholding obligations at the time of Common Stock grants or vesting of restricted stock unit grants, in accordance with the provisions of the 2011 EIP. Pursuant to the 2011 EIP, for a period of five (3) (5) years commencing on January 1, 2013 and ending on (and including) January 1, 2017, the aggregate number of shares of Common Stock that may be issued pursuant to stock awards will automatically adjust on each January 1 so that it will equal (i) thirteen percent (13%) of the fully diluted shares as of the immediately preceding December 31, reduced by (ii) the number of shares of Common Stock issuable upon exercise of outstanding options under the Sunshine Heart, Inc. Amended and Restated 2002 Stock Plan. The 231,666 shares consist of 231,666 shares that were automatically added to the shares authorized for issuance under the Directors' EIP on January 1, 2015 pursuant to an "evergreen" provision contained in the Directors' EIP. Pursuant to the Directors' EIP, the share reserve under the Directors' EIP will automatically increase on January 1 to the Amended of the Directors' EIP will automatically increase on January 1 to the director a period of

(4)not more than ten years, commencing on January 1, 2014 and ending on (and including) January 1, 2023, to an amount equal to two percent (2%) of the fully diluted shares outstanding on December 31st of the preceding calendar year; provided that the Board of Directors may act prior to January 1st of a given year to provide that there will be no January 1st increase in the share reserve for such year or that the increase in the share reserve for such year will be a lesser number of shares than would otherwise occur.

The 150,000 shares consist of 150,000 shares reserved for future grant under the New-Hire Plan pursuant to a Second Amendment to the New-Hire Plan that was approved by the Registrant's Board of Directors on February 19, 2015.

EXPLANATORY NOTE

68-0533453

55344 (Zip Code) This Registration Statement on Form S-8 is being filed for the purpose of registering an additional (i) 604,058 shares reserved for future grant pursuant to the Registrant's Second Amended and Restated 2011 Equity Incentive Plan, (ii) 231,666 shares reserved for future grant pursuant to the Registrant's 2013 Non-Employee Directors' Equity Incentive Plan and (iii) 150,000 shares reserved for future grant pursuant to the Registrant's New-Hire Equity Incentive Plan.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

The contents of the Registration Statements on Form S-8 previously filed with the Securities and Exchange Commission (the "*Commission*") on September 14, 2012 (File No. 333-183925), May 30, 2013 (File No. 333-188935), August 9, 2013 (File No. 333-190499) and March 18, 2014 (File No. 333-194642) are incorporated by reference herein.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents By Reference.

The following documents filed with the Commission by the Registrant are hereby incorporated by reference in this Registration Statement:

(a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the Commission on March 20, 2015;

(b) The Registrant's Current Reports on Form 8-K filed with the Commission on January 7, 2015 and February 19, 2015, respectively;

(c) The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2014 from our definitive Proxy Statement for the Annual Meeting of Stockholders to be held on May 21, 2015, to be filed with the Commission within 120 days after the end of the fiscal year covered by the Annual Report on Form 10-K for the year ended December 31, 2014;

(d) The description of the Registrant's Common Stock contained in the Registration Statement on Form 10 (File No. 001-35312) filed pursuant to Section 12(b) on September 30, 2011 and all amendments thereto; and

(e) The description of the Registrant's Series A Junior Participating Preferred Stock, par value \$0.0001 per share, in the Registration Statement on Form 8-A (File No. 001-35312) filed with the Commission on June 14, 2013.

In addition, all documents the Registrant subsequently files pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities covered hereby then remaining unsold are incorporated by reference in this Registration Statement and are a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein, or in any subsequently filed document, which also is or is deemed to be incorporated by reference herein, modifies or supersedes such prior statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute part of this Registration Statement.

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Item 8. Exhibits.

The Exhibit Index attached to this Registration Statement is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Eden Prairie, State of Minnesota, on March 20, 2015.

SUNSHINE HEART, INC.

By: /s/ CLAUDIA DRAYTON

Name: Claudia Drayton Title: Chief Financial Officer

We, the undersigned officers and directors of Sunshine Heart, Inc., hereby constitute David A. Rosa and Claudia Drayton, as the true and lawful attorneys with full power to them, and each of them singly to sign for us and in our names, in the capacities indicated below the Registration Statement filed herewith and any amendments to said Registration Statement, and generally to do all such things in our name and behalf in our capacities as officers and directors to enable Sunshine Heart, Inc. to comply with the provisions of the Securities Act of 1933 and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto. Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ DAVID A. ROSA David A. Rosa	President, Chief Executive Officer and Director (principal executive officer)	March 20, 2015
/s/ CLAUDIA DRAYTON Claudia Drayton	Chief Financial Officer (principal financial and accounting officer)	March 20, 2015
/s/ PAUL R. BUCKMAN Paul R. Buckman	Director	March 20, 2015
/s/ GEOFFREY E. BROOKE Geoffrey E. Brooke	Director	March 20, 2015
/s/ JOHN L. ERB John L. Erb	Director	March 20, 2015
/s/ JON W. SALVESON Jon W. Salveson	Director	March 20, 2015
/s/ GREGORY D. WALLER Gregory D. Waller	Director	March 20, 2015
/s/ WARREN S. WATSON Warren S. Watson	Director	March 20, 2015
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EXHIBIT INDEX

Exhibit Number	Exhibit Description	Form	File Number	Date of First Filing	Exhibit Number	Filed Herewith
4.1	Certificate of Incorporation, as amended	10	001-35312	February 1, 2012	3.1	
4.2	Form of Certificate of Designations of Series A Junior Participating Preferred Stock	8-K	001-35312	June 14, 2013	3.1	
4.3	Amended and Restated Bylaws	10	001-35312	September 30, 2011	3.2	
4.4	Rights Agreement dated June 14, 2013 by and between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent	8-K	001-35312	June 14, 2013	4.1	
4.5	Warrant to Purchase Stock, dated February 18, 2015, issued to Silicon Valley Bank	8-K	001-35312	February 19, 2015	4.1	
4.6	Warrant to Purchase Stock, dated February 18, 2015, issued to Life Science Loans, LLC	8-K	001-35312	February 19, 2015	4.2	
5.1	Opinion of Honigman Miller Schwartz Cohn LLP					Х
23.1	Consent of Ernst & Young LLP					Х
23.2	Consent of Honigman Miller Schwartz and Cohn LLP (included in its opinion filed as Exhibit 5.1 to this Registration Statement)					Х
24.1	Power of Attorney (included with signatures)					Х
99.1	Second Amended and Restated 2011 Equity Incentive Plan, as amended	14A	001-35312	July 27, 2012	App. A	
99.2	Form of Stock Option Grant Notice and Option Agreement for 2011 Equity Incentive Plan	10	001-35312	September 30, 2011	10.5	
99.3	Form of Stock Option Grant Notice and Option Agreement (Senior Management) for 2011 Equity Incentive Plan	10	001-35312	September 30, 2011	10.6	
99.4	Form of Stock Option Grant Notice and Option Agreement (Director) for 2011 Equity Incentive	8-K	001-35312	September 18, 2012	10.1	

Plan

99.5

Form of Stock Grant Notice and Award Agreement for 2011 Equity Incentive Plan

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			Incorporated I			
Exhibit Number	Exhibit Description	Form	File Number	Date of First Filing	Exhibit Number	Filed Herewith
99.6	Form of Restricted Stock Unit Grant Notice and Agreement for 2011 Equity Incentive Plan	8-K	001-35312	September 10, 2013	10.2	
99.7	2013 Non-Employee Directors' Equity Incentive Plan	14A	001-35312	April 5, 2013	App. A	
99.8	Form of Stock Option Grant Notice and Option Agreement for 2013 Non-Employee Directors' Equity Incentive Plan	10-K	001-35312	March 20, 2015	10.10	
99.9	Form of Restricted Stock Unit Award Grant Notice and Agreement for 2013 Non-Employee Directors' Equity Incentive Plan	10-K	001-35312	March 20, 2015	10.11	
99.10	New-Hire Equity Incentive Plan	10-Q	001-35312	August 8, 2013	10.1	
99.11	First Amendment to New-Hire Equity Incentive Plan	10-Q	001-35312	November 12, 2013	10.1	
99.12	Second Amendment to New-Hire Equity Incentive Plan					Х
99.13	Form of Stock Option Grant Notice and Option Agreement for New-Hire Equity Incentive Plan	10-K	001-35312	March 20, 2015	10.14	
		5				

HONIGMAN

Honigman Miller Schwartz and Cohn LLP Attorneys and Counselors

(313) 465-7000 Fax: (313) 465-8000 www.honigman.com

March 20, 2015

Sunshine Heart, Inc. 12988 Valley View Road Eden Prairie, MN 55344

RE: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Sunshine Heart, Inc., a Delaware corporation (the "*Company*"), in connection with the preparation and filing of a Registration Statement on Form S-8 (the "*Registration Statement*") with the Securities and Exchange Commission (the "*Commission*") for the registration under the Securities Act of 1933, as amended (the "*Securities Act*"), of up to 985,724 shares of the Company's Common Stock, \$0.0001 par value per share (the "*Shares*"), to be issued pursuant to awards under the Company's Second Amended and Restated 2011 Equity Incentive Plan, 2013 Non-Employee Directors' Equity Incentive Plan and New-Hire Equity Incentive Plan (collectively, the "*Plans*").

Based on our examination of such documents and other matters as we deem relevant, we are of the opinion that the Shares, when offered, sold and issued by the Company in accordance with the applicable Plans and the awards thereunder, the Registration Statement and the related Prospectuses, will be validly issued, fully paid and nonassessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not hereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission under the Securities Act.

Very truly yours,

/S/ HONIGMAN MILLER SCHWARTZ AND COHN LLP

350 East Michigan Avenue · Suite 300 · Kalamazoo, Michigan 49007-3800 Detroit · Lansing · Oakland County · Ann Arbor · Kalamazoo

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Sunshine Heart, Inc. Second Amended and Restated 2011 Equity Incentive Plan, the Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan, and the Sunshine Heart, Inc. New-Hire Equity Incentive Plan, of our report dated March 20, 2015, with respect to consolidated financial statements of Sunshine Heart, Inc. and subsidiaries included in its Annual Report (Form 10-K) for the year ended December 31, 2014, filed with the Securities and Exchange Commission.

/S/ ERNST & YOUNG LLP Minneapolis, Minnesota

March 20, 2015

SECOND AMENDMENT TO THE SUNSHINE HEART, INC. NEW-HIRE EQUITY INCENTIVE PLAN

The Sunshine Heart, Inc. New-Hire Equity Incentive Plan (the "Plan") is hereby amended in the following respects, effective February 19, 2015, in accordance with Section 2(b)(vi) of the Plan.

The first sentence of Section 3(a) of the Plan is deleted in its entirety and replaced with the following sentence:

"Subject to the provisions of Section 9 relating to adjustments upon changes in stock, the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards after the Effective Date shall not exceed, in the aggregate, 750,000 shares (the "*Share Reserve*")."