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

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No. _____)*

SafeStitch Medical, Inc.
(Name of Issuer)

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

78645Y102
(CUSIP Number)

September 3, 2013
(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(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 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)	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	SVLSF IV, LLC	
(2)	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(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 33,983,464(1)
	(6)	SHARED VOTING POWER - 0 -
	(7)	SOLE DISPOSITIVE POWER 33,983,464(1)
	(8)	SHARED DISPOSITIVE POWER - 0 -
(9)	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 33,983,464(1)	
(10)	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 14%(2)	
(12)	TYPE OF REPORTING PERSON (see instructions) OO	

(1) Includes (i) 22,433,674 shares of Common Stock and (ii) 11,549,790 shares of Common Stock issuable upon the conversion of 1,154,979 shares of Series B Convertible Preferred Stock. Each share of Series B Convertible Preferred Stock of the Issuer is initially convertible, subject to certain conditions, into ten shares of Common Stock of Issuer. Each share of Series B Convertible Preferred Stock is entitled to ten votes per share, whereas each share of Common Stock is entitled to one vote per share.

(2) Assumes conversion of all such reporting person's shares of Series B Convertible Preferred Stock. Percentage calculated using a denominator of 242,693,659 shares of Common Stock of Issuer, which includes 167,246,615 shares of Common Stock outstanding as of September 3, 2013 and 75,447,044 shares of Common Stock issuable upon conversion of the 7,544,704.4 shares of Series B Convertible Preferred Stock then outstanding.

(1)	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) SV Life Sciences Fund IV, L.P.	
(2)	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(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 33,983,464(1)
	(6)	SHARED VOTING POWER - 0 -
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	(8)	SHARED DISPOSITIVE POWER - 0 -
(9)	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 33,983,464(1)	
(10)	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 14%(2)	
(12)	TYPE OF REPORTING PERSON (see instructions) PN	

(1)	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) SV Life Sciences Fund IV Strategic Partners, L.P.	
(2)	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(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 33,983,464(1)
	(6)	SHARED VOTING POWER - 0 -
	(7)	SOLE DISPOSITIVE POWER 33,983,464(1)
	(8)	SHARED DISPOSITIVE POWER - 0 -
(9)	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 33,983,464(1)	
(10)	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 14%(2)	
(12)	TYPE OF REPORTING PERSON (see instructions) PN	

(1)	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) SV Life Sciences Fund IV (GP), L.P.	
(2)	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(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 33,983,464(1)
	(6)	SHARED VOTING POWER - 0 -
	(7)	SOLE DISPOSITIVE POWER 33,983,464(1)
	(8)	SHARED DISPOSITIVE POWER - 0 -
(9)	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 33,983,464(1)	
(10)	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
(11)	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 14%(2)	
(12)	TYPE OF REPORTING PERSON (see instructions) PN	

Item 1.

- (a) Name of Issuer: SafeStitch Medical, Inc.
- (b) Address of Issuer's Principal Executive Offices: 4400 Biscayne Blvd., Suite A-100 Miami, Florida 33137-3212

Item 2.

- (a) Name of Person Filing: This statement is filed by: (i) SV Life Sciences Fund IV, L.P. ("SVLS IV LP") and SV Life Sciences Fund IV Strategic Partners, L.P. ("Strategic Partners"), each a Delaware limited partnership, direct owners of the shares of Common Stock of the Issuer and Series B Preferred Stock of the Issuer (together, the "Shares"); (ii) SV Life Sciences Fund IV (GP), L.P., a Delaware limited partnership ("SVLS IV GP") and general partner of SVLS IV LP and Strategic Partners; and (iii) SVLSF IV, LLC, a Delaware limited liability company and general partner of SVLS IV GP. Each of SVLS IV LP, Strategic Partners, SVLS IV GP and SVLSF IV, LLC are sometimes individually referred to herein as a "Reporting Person" and collectively as the "Reporting Persons."
- (b) Address of the Principal Office or, if none, residence:
The principal business address of the Reporting Persons is c/o SV Life Sciences, One Boston Place, 201 Washington Street, Suite 3900, Boston, MA 02108.
- (c) Citizenship:
Each of the Reporting Persons are organized under the laws of the State of Delaware.
- (d) Title of Class of Securities:
Common Stock, par value \$0.001 per share
- (e) CUSIP Number:
78645Y102

Item 3.

Not applicable.

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: The Reporting Persons may each be deemed to beneficially own, in the aggregate, 33,983,464 shares of Common Stock, constituting approximately 14% of the Common Stock outstanding, and which includes 22,433,674 shares of Common Stock and 11,549,790 shares of Common Stock issuable upon the conversion of 1,154,979 shares of Series B Convertible Preferred Stock. Each share of Series B Convertible Preferred Stock of the Issuer is initially convertible, subject to certain conditions, into ten shares of Common Stock of Issuer. Each share of Series B Convertible Preferred Stock is entitled to ten votes per share, whereas each share of Common Stock is entitled to one vote per share.

As of the close of business on September 3, 2013, SVLS IV LP owned directly 33,045,287 shares of Common Stock, constituting approximately 13.6% of the Common Stock outstanding, and which includes 21,814,352 shares of Common Stock and 11,230,935 shares of Common Stock issuable upon the conversion of 1,123,093.5 shares of Series B Preferred Stock.

As of the close of business on September 3, 2013, Strategic Partners owned directly 938,177 shares of Common Stock, constituting approximately 0.4% of the Common Stock outstanding, and which includes 619,322 shares of Common Stock and 318,855 shares of Common Stock issuable upon the conversion of 31,885.5 shares of Series B Preferred Stock.

SVLS IV LP and Strategic Partners (each a "Fund", or collectively the "Funds") may be deemed to beneficially own the shares held by each other Fund because of certain contractual relationships among the Funds and their affiliates. The Funds disclaim beneficial ownership of shares held by any other Fund except to the extent of any pecuniary interest therein.

SVLS IV GP, the general partner of SVLS IV LP and Strategic Partners, may be deemed to share voting and dispositive power over the shares held by SVLS IV LP and Strategic Partners. SVLS IV GP disclaims beneficial ownership of shares held by SVLS IV LP and Strategic Partners except to the extent of any pecuniary interest therein.

SVLSF IV, LLC, the general partner of SVLS IV GP, may be deemed to share voting and dispositive power over the shares held by SVLS IV LP and Strategic Partners. SVLSF IV, LLC disclaims beneficial ownership of shares held by SVLS IV LP and Strategic Partners except to the extent of any pecuniary interest therein.

- (b) Percent of class: The Reporting Persons may each be deemed to beneficially own, in the aggregate, 14% (based upon 242,693,659 shares of Common Stock outstanding, which is the total of 167,246,615 shares of Common Stock outstanding as of September 3, 2013, and 75,447,044 shares of Common Stock issuable upon conversion of all of the 7,544,704.4 shares of Series B Preferred Stock outstanding as of September 3, 2013). Item 4(a) is incorporated herein by reference.
- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote: 33,983,464⁽³⁾
 - (ii) Shared power to vote or to direct the vote: -0-
 - (iii) Sole power to dispose or to direct the disposition of: 33,983,464⁽³⁾
 - (iv) Shared power to dispose or to direct the disposition of: -0-

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

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

Not applicable.

⁽³⁾ Each of SVLS IV LP and Strategic Partners have sole power to vote and dispose of the Shares they own directly. Each of Strategic Partners, SVLS IV GP and SVLSF IV, LLC may be deemed to have sole power to vote and dispose of the Shares reported in this Schedule 13G owned directly by SVLS IV LP. Each of SVLS IV LP, SVLS IV GP and SVLSF IV, LLC may be deemed to have sole power to vote and dispose of the Shares reported in this Schedule 13G owned directly by Strategic Partners.

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.

See Exhibit A attached hereto.

Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certification.

By signing below I certify that, to the best of my 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 that purpose or effect.

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.

Dated: September 9, 2013

SVLSF IV, LLC

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV (GP), L.P.

By: SVLSF IV LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV, L.P.

By: SV Life Sciences Fund IV (GP), L.P., its General Partner

By: SVLSF IV, LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV STRATEGIC PARTNERS,
L.P.

By: SV Life Sciences Fund IV (GP), L.P., its General Partner

By: SVLSF IV, LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

EXHIBIT INDEX

Exhibit A. Joint Filing Agreement by and among SV Life Sciences Fund IV, L.P., SV Life Sciences Fund IV Strategic Partners, L.P., SV Life Sciences Fund IV (GP), L.P. and SVLSF IV, LLC, dated September 3, 2013.*

* Filed herewith.

JOINT FILING AGREEMENT

In accordance with Rule 16a-3(j) and Rule 13d-1(k)(1) and under the Securities Exchange Act of 1934, as amended, the undersigned agree to the joint filing on behalf of each of them of Forms 3, 4, 5 and Schedules 13D and 13G (including any and all amendments thereto) with respect to the Common Stock, par value \$0.001 per share, of SafeStitch Medical, Inc. and further agree that this Joint Filing Agreement shall be included as an exhibit to such joint filings.

The undersigned further agree that each party hereto is responsible for the timely filing of such Forms 3, 4, 5 and Schedules 13D and 13G and any amendments thereto, and for the completeness and accuracy of the information concerning such party contained therein; provided that no party is responsible for the completeness or accuracy of the information concerning any other filing party, unless such party knows or has reason to believe that such information is inaccurate.

This Joint Filing Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original instrument, but all of such counterparts together shall constitute one agreement.

In evidence thereof, the undersigned, being duly authorized, hereby execute this Joint Filing Agreement as of September 3, 2013.

SVLSF IV, LLC

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV (GP), L.P.

By: SVLSF IV LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV, L.P.

By: SV Life Sciences Fund IV (GP), L.P., its General Partner

By: SVLSF IV, LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member

SV LIFE SCIENCES FUND IV STRATEGIC PARTNERS,
L.P.

By: SV Life Sciences Fund IV (GP), L.P., its General Partner

By: SVLSF IV, LLC, its General Partner

By: /s/ Denise Marks

Name: Denise Marks

Title: Member