

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM S-8

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Pulse Biosciences, Inc.

(Exact name of Registrant as specified in its charter)

Nevada

(State or other jurisdiction of
incorporation or organization)

46-5696597

(I.R.S. Employer
Identification No.)

**849 Mitten Road, Suite 104
Burlingame, CA 94010**

(Address of principal executive offices, including zip code)

2017 Equity Incentive Plan

2017 Employee Stock Purchase Plan

(Full title of the plan)

**Darrin R. Uecker
Chief Executive Officer
Pulse Biosciences, Inc.
849 Mitten Road, Suite 104
Burlingame, CA 94010
(650) 697-3939**

(Name, address and telephone number, including area code, of agent for service)

Andrew D. Hoffman

**Wilson Sonsini Goodrich &
Rosati, P.C.**

650 Page Mill Road

**Palo Alto, California 94304
(650) 493-9300**

Copies to:

**Brian Dow
Senior Vice President and
Chief Financial Officer
Pulse Biosciences, Inc.
849 Mitten Road, Suite 104
Burlingame, CA 94010**

(650) 697-3939

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

Large accelerated filer

Accelerated filer

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

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share, reserved for issuance pursuant to the 2017 Equity Incentive Plan	2,096,518(2)	26.34(5)	\$55,222,284.12	\$6,400.27
Common Stock, \$0.001 par value per share, reserved for issuance pursuant to the 2017 Employee Stock Purchase Plan	250,000(3)	22.40(6)	\$5,600,000.00	\$649.04
Common Stock, \$0.001 par value per share, reserved for issuance pursuant to equity awards outstanding under the 2017 Equity Incentive Plan	534,700(4)	27.14(7)	14,511,758.00	\$1,681.92
Total:	2,881,218		\$75,334,042.12	\$8,731.24

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of common stock of the Registrant that become issuable under the 2017 Equity Incentive Plan (the "2017 Plan") and the 2017 Employee Stock Purchase Plan ("2017 ESPP") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the Registrant's outstanding shares of common stock ("Common Stock").

(2) Represents (i) 965,300 shares of Common Stock reserved for issuance pursuant to future awards under the 2017 Plan, (ii) 56,748 shares of common stock reserved but not issued pursuant to equity awards under the Registrant's 2015 Equity Incentive Plan (the "2015 Plan") as of May 16, 2017 that will be rolled over into the 2017 Plan, and (iii) 1,074,470 shares of common stock subject to outstanding equity awards previously granted under the 2015 Plan that may (A) expire or terminate without having been exercised on or after May 16, 2017 or (B) be forfeited to or repurchased by the Registrant on or after May 16, 2017 and would, in each case, be added to the available shares under the 2017 Plan.

(3) Represents 250,000 shares of the Common Stock reserved for issuance pursuant to future awards under the 2017 ESPP.

(4) Represents 534,700 shares of common stock reserved for issuance pursuant to equity awards outstanding under the 2017 Plan as of the date of this Registration Statement.

(5) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) and Rule 457(h) under the Securities Act of 1933, as amended, on the basis of \$26.34 per share, which represents the average of the high and low prices of the Registrant's common stock, as reported on the NASDAQ Capital Market on May 15, 2017.

(6) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) and Rule 457(h) under the Securities Act of 1933, as amended, on the basis of 85% of \$26.34 per share, which is the average of the high and low prices of the Registrant's common stock, as reported on the NASDAQ Capital Market on May 15, 2017. Pursuant to the 2017 ESPP, the purchase price of the shares of Common Stock reserved for issuance thereunder will be 85% of the lower of the fair market value of the common stock on (i) the first trading day of the offering period or (ii) on the purchase date.

(7) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) and Rule 457(h) under the Securities Act of 1933, as amended, on the basis of \$27.14 per share, the exercise price for equity awards outstanding under the 2017 Plan as of the date of this Registration Statement.

PART I

INFORMATION REQUIRED IN THE PROSPECTUS

The information specified in Item 1 and Item 2 of Part I of Form S-8 is omitted from this Registration Statement on Form S-8 (the "Registration Statement") in accordance with the provisions of Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"), and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I of Form S-8 will be delivered to the participants of the equity benefit plans and to option award recipients pursuant to stock option agreements covered by this Registration Statement as specified by Rule 428(b)(1) under the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Pulse Biosciences, Inc. (the "Registrant") hereby incorporates by reference into this Registration Statement the following documents previously filed with the Securities and Exchange Commission (the "Commission"):

- (1) The Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2016, filed with the Commission on March 20, 2017;
- (2) All other reports filed by the Registrant with the Commission pursuant to Sections 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Registrant's Annual Report referred to in (1) above; and
- (3) The description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A (File No. 001-37744) filed with the Commission on April 15, 2016 pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the respective dates of filing of such documents; *provided, however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement.

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 statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Under Sections 78.7502, 78.751 and 78.752 of the Nevada Revised Statutes, the Registrant has broad powers to indemnify and insure its directors and officers against liabilities they may incur in their capacities as such.

The Registrant's officers and directors are shielded, as provided by the Nevada Revised Statutes and the Registrant's articles of incorporation and bylaws, from liability to the company or the stockholders for monetary liabilities unless it is specifically limited by its articles of incorporation. The Registrant's articles of incorporation do not impose any limit on its directors' liability. Excepted under the law from that limitation of liability are: (a) a willful failure to deal fairly with the company or its stockholders in connection with a matter in which the director has a material conflict of interest; (b) a violation of criminal law, unless the director had reasonable cause to believe that his or her conduct was lawful or no reasonable cause to believe that his or her conduct was unlawful; (c) a transaction from which the director derived an improper personal profit; and (d) willful misconduct.

The Registrant's articles of incorporation and bylaws provide that it will indemnify its directors and officers to the fullest extent not prohibited by Nevada law; provided, however, that it may modify the extent of such indemnification by individual contracts with its directors and officers; and, provided, further, that it shall not be required to indemnify any director or officer in connection with any proceeding, or part thereof, initiated by such person unless such indemnification: (a) is expressly required to be made by law, (b) the proceeding was authorized by the Registrant's board of directors, (c) is provided by it, in its sole discretion, pursuant to the powers vested in it under Nevada law or (d) is required to be made pursuant to the bylaws.

In addition to the foregoing, the Registrant has entered into individual indemnification agreements with each of its directors, which provide for the indemnification of each of them for any expenses, settlements and other costs associated or incurred with their defense or involvement with an action brought by a stockholder or third party in connection with their activities as a director. The Registrant maintains insurance coverage for the benefit of its current and past directors, officers and employees, including those of its subsidiaries.

These indemnification provisions and the indemnification agreements entered into between the Registrant and its officers and directors may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

See also the undertakings set out in response to Item 9 herein.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

See the Exhibit Index on the page immediately following the signature pages to the Registration Statement.

Item 9. Undertakings.

A. The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in
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volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement.

Provided, however, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

INDEX TO EXHIBITS

Exhibit Number	Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
4.1	Form of Common Stock certificate of the Registrant	S-1/A	333-208694	4.1	03/07/2016
4.2	2017 Equity Incentive Plan and forms of agreement thereunder.	8-K	001-37744	10.1	05/19/2017
4.3	2017 Employee Stock Purchase Plan and forms of agreement thereunder.	8-K	001-37744	10.2	05/19/2017
5.1	Opinion of Fennemore Craig, P.C.				
23.1	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm				
23.2	Consent of Fennemore Craig, P.C. (included in Exhibit 5.1)				
24.1	Power of Attorney (contained on signature pages hereto)				

May 22, 2017

Pulse Biosciences, Inc.
849 Mitten Road, Suite 104
Burlingame, CA 94010

Re: Registration of Common Stock of Pulse Biosciences, Inc.

Ladies and Gentlemen:

We are acting as special Nevada counsel for Pulse Biosciences, Inc., a Nevada corporation (the "Company"), in connection with the registration under a Registration Statement on Form S-8 (the "Registration Statement") by the Company under the Securities Act of 1933, as amended (the "Act"), of 2,881,218 shares of common stock, par value \$.001 per share of the Company ("Common Stock") consisting of (i) 2,096,518 shares of Common Stock that may be issued by the Company pursuant to the Company's 2017 Equity Incentive Plan (the "2017 EIP"), (ii) 534,700 shares of Common Stock that may be issued by the Company pursuant to equity awards outstanding under the 2017 EIP (all such shares of Common Stock that may be issued pursuant to the 2017 EIP, the "EIP Shares"), and (iii) 250,000 shares of Common Stock that may be issued by the Company pursuant to the Company's 2017 Employee Stock Purchase Plan (the "2017 ESPP") (all such shares of Common Stock that may be issued pursuant to the 2017 ESPP, the "ESPP Shares").

We have examined originals or copies of each of the documents listed below:

1. The Amended and Restated Articles of Incorporation of the Company, as amended, as certified by an officer of the Company as of the date hereof;
2. The Amended and Restated Bylaws of the Company, as certified by an officer of the Company as of the date hereof;
3. Resolutions of the Board of Directors of the Company relating to the 2017 EIP and the 2017 ESPP, as certified by an officer of the Company as of the date hereof;
4. The 2017 EIP;

5. The 2017 ESPP; and
6. The Registration Statement.

We have examined originals or copies of such other corporate records, certificates of corporate officers and public officials and other agreements and documents as we have deemed necessary or advisable for purposes of this opinion letter. We have relied upon the certificates of all public officials and corporate officers with respect to the accuracy of all factual matters contained therein.

Without limiting the generality of the foregoing, in our examination, we have, with your permission, assumed without independent verification, that (i) all documents submitted to us as originals are authentic, the signatures on all documents that we examined are genuine, and all documents submitted to us as certified, conformed, photostatic, electronic or facsimile copies conform to the original document; (ii) all corporate records made available to us by the Company and all public records we have reviewed are accurate and complete; and (iii) at the time the shares of Common Stock being registered under the Registration Statement are issued, there will be sufficient authorized but unissued Common Stock available to allow for such issuance.

Based upon the foregoing, and subject to the following, it is our opinion that:

1. Issuance of the EIP Shares has been duly authorized by the Company and, when issued in accordance with the terms of the 2017 EIP, the EIP Shares will be validly issued, fully paid and nonassessable.
2. Issuance of the ESPP Shares has been duly authorized by the Company and, when issued in accordance with the terms of the 2017 ESPP, the ESPP Shares will be validly issued, fully paid and nonassessable.

The opinions expressed above are limited to the laws of the State of Nevada, including reported judicial decisions.

This opinion is issued in the State of Nevada. By issuing this opinion, Fennemore Craig, P.C. (i) shall not be deemed to be transacting business in any other state or jurisdiction other than the State of Nevada and (ii) does not consent to the jurisdiction of any state other than the State of Nevada. Any claim or cause of action arising out of the opinions expressed herein must be brought in the State of Nevada. Your acceptance of this opinion shall constitute your agreement to the foregoing.

We consent to your filing of this opinion as an exhibit to the Registration Statement and further consent to the use of our name wherever appearing in the Registration Statement. We further consent to the incorporation by reference of this opinion and consent in any registration statement filed pursuant to Rule 462(b) under the Act with respect to the Common Stock. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder, or Item 509 of Regulation S-K. This opinion letter is rendered as of the date first written above and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company or the Common Stock.

Very truly yours,

/s/ Fennemore Craig, P.C.

Fennemore Craig, P.C.

CE/dl

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors

Pulse Biosciences, Inc.

We hereby consent to the use in this Registration Statement on Form S-8 of our report dated March 20, 2017, relating to the consolidated balance sheets of Pulse Biosciences, Inc. (as defined in Note 2 to the consolidated financial statements) as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for the years ended December 31, 2016 and 2015, and for the period from May 19, 2014 (inception) through December 31, 2014, which is incorporated by reference in the Registration Statement.

/s/ Gumbiner Savett Inc.
May 22, 2017
Santa Monica, California
