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)

Delaware

(State or other jurisdiction of incorporation or organization)

46-5696597 (I.R.S. Employer Identification Number)

3957 Point Eden Way Hayward, California 94545 (Address of Principal Executive Offices) (Zip Code)

2017 Equity Incentive Plan (Full title of the plan)

Darrin R. Uecker **President and Chief Executive Officer** Pulse Biosciences, Inc. 3957 Point Eden Way Hayward, California 94545 (Name and address of agent for service)

(510) 906-4600

(Telephone number, including area code, of agent for service)

Copies to:

Adam W. Finerman **BakerHostetler LLP** 45 Rockefeller Center New York, NY 10111 (212) 589-4233

Sandra Gardiner **Chief Financial Officer and Executive Vice President of Finance and Administration** Pulse Biosciences, Inc. 3957 Point Eden Way Hayward, California 94545 (510) 906-4600

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," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer □ Accelerated filer \square Non-accelerated filer ⊠ 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. □

EXPLANATORY NOTE

Pursuant to General Instruction E of Form S-8, the Registrant is filing this Registration Statement on Form S-8 with the U.S. Securities and Exchange Commission (the "Commission") to register 1,188,657 additional shares of the Registrant's common stock reserved for issuance pursuant to the 2017 Equity Incentive Plan. This Registration Statement hereby incorporates by reference the contents of the Registrant's registration statement on Form S-8 filed with the Commission on January 17, 2018 (Registration No. 333-222582).

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 plan 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 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 Commission:

- (1) The Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2021, filed with the Commission on March 31, 2022 pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act");
- (2) The Registrant's Quarterly Report on Form 10-Q for its fiscal quarter ended March 31, 2022, filed with the Commission on May 11, 2022 pursuant to the Exchange Act;
- (3) The Registrant's Current Reports on Form 8-K filed on January 11, 2022, February 8, 2022, February 15, 2022, March 21, 2022, March 31, 2022, April 14, 2022, and May 4, 2022; and
- (4) 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 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 that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be 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 other 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 Section 145 of the Delaware General Corporation Law, Registrant has broad powers to indemnify its directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act. Registrant's Bylaws (the "Bylaws") provide that Registrant shall indemnify its directors and officers if such officer or director acted (i) in good faith, (ii) in a manner reasonably believed to be in or not opposed to the best interests of Registrant, and (iii) with respect to any criminal action or proceeding, had no reasonable cause to believe such conduct was unlawful. Registrant believes that indemnification under its Bylaws covers at least negligence and gross negligence, and requires Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the directors and officers to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Bylaws further provide that rights conferred under such Bylaws shall not be deemed to be exclusive of any other right such persons may have or acquire under any agreement, vote of stockholders or disinterested directors, or otherwise.

In addition, Registrant's Certificate of Incorporation (the "Certificate of Incorporation") provides that, pursuant to Delaware law, none of its directors shall be liable for monetary damages for breach of his or her fiduciary duty of care to Registrant and its stockholders to the fullest extent permitted by the Delaware General Corporation Law as it presently exists or may hereafter be amended from time to time. This provision in the Certificate of Incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to Registrant for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are in willful or negligent violation of applicable Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws. The Certificate of Incorporation further provides that Registrant shall indemnify its directors and officers to the fullest extent permitted by law and requires Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the director to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Certificate of Incorporation also provides that rights conferred under such Certificate of Incorporation shall not be deemed to be exclusive of any other right such persons may have or acquire under any statute, the Certificate of Incorporation, the Bylaws, agreement, vote of stockholders or disinterested directors, or otherwise. Registrant has obtained liability insurance policies for the officers and directors that, subject to certain limitations, terms and conditions, will insure them against losses arising from wrongful acts (as defined by the policy) in their capacity as directors or officers.

In addition, Registrant has entered into agreements to indemnify its directors and certain of its officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify Registrant's directors and certain of its officers for certain expenses (including attorney's fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of Registrant, on account of services as a director or officer of Registrant or as a director or officer of any subsidiary of Registrant, or as a director or officer of any other company or enterprise that the person provides services to at the request of Registrant.

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

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following exhibits are filed as part of this registration statement.

		Incorporated by Reference				
Exhibit Number	Description	Form	File No.	Exhibit	Filing Date	
4.1	Form of Common Stock certificate of the	8-	001-		June 18,	
	Registrant	K12B	37744	4.1	2018	
<u>4.2</u>	Pulse Biosciences, Inc. 2017 Equity					
	Incentive Plan, as amended, and forms of		001-		May 19,	
	agreement thereunder.	8-K	37744	10.1	2017	
<u>5.1</u>	Opinion of Baker Hostetler LLP, counsel to					
	the Registrant					
<u>23.1</u>	Consent of Independent Registered Public					
	Accounting Firm					
<u>23.2</u>	Consent of Baker Hostetler LLP (included in					
	<u>Exhibit 5.1)</u>					
<u>24.1</u>	Power of Attorney (contained on signature					
	<u>pages hereto)</u>					
<u>107</u>	Filing Fee Table					

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 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 percent 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 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 the 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.

SIGNATURES

Pursuant to the requirements of the Securities Act, 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 Hayward, California, on May 13, 2022.

PULSE BIOSCIENCES, INC.

By: /s/ Darrin R. Uecker

Darrin R. Uecker

President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Darrin R. Uecker and Sandra A. Gardiner, and each of them, as his true and lawful attorney-in-fact and agent with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Registration Statement on Form S-8 (including post-effective amendments), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact, proxy and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact, proxy and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date		
/s/ Darrin R. Uecker Darrin R. Uecker	President, Chief Executive Officer and Director (Principal Executive Officer)	May 13, 2022		
/s/ Sandra A. Gardiner Sandra A. Gardiner	Chief Financial Officer, Executive Vice President of Finance and Administration, and Treasurer (Principal Financial and Accounting Officer)	May 13, 2022		
/s/ Robert W. Duggan Robert W. Duggan	Chairman of the Board of Directors	May 13, 2022		
/s/ Mitchell E. Levinson Mitchell E. Levinson	Chief Strategy Officer and Director	May 13, 2022		
/s/ Manmeet S. Soni Manmeet S. Soni	Director	May 13, 2022		
/s/ Shelley D. Spray Shelley D. Spray	Director	May 13, 2022		
/s/ Richard van den Broek Richard van den Broek	Director	May 13, 2022		
/s/ Mahkam Zanganeh Mahkam Zanganeh	Director	May 13, 2022		

BakerHostetler

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45 Rockefeller Plaza New York, NY 10111

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May 13, 2022

Pulse Biosciences, Inc. 3957 Point Eden Way Hayward, California 94545

Ladies and Gentlemen:

We have acted as counsel to Pulse Biosciences, Inc., a Delaware corporation (the "Company"), with respect to the Company's Registration Statement on Form S-8 (the "Registration Statement") to be filed by the Company with the Securities and Exchange Commission (the "Commission") on or about May 13, 2022 in connection with the registration under the Securities Act of 1933, as amended (the "Act"), by the Company of 1,188,657 shares of Common Stock, \$0.001 par value per share (the "Common Stock"), of the Company to be offered and sold pursuant to the Company's 2017 Equity Incentive Plan (the "Incentive Plan").

We have examined such documents and such matters of fact and law as we deem necessary to render the opinions contained herein. In our examination, we have assumed, but have not independently verified, the genuineness of all signatures, the conformity to original documents of all documents submitted to us as certified, facsimile or other copies, and the authenticity of all such documents. As to questions of fact material to this opinion, we have relied on certificates or comparable documents of public officials and of officers and representatives of the Company.

Based on the foregoing, and subject to the qualifications stated herein, we are of the opinion that the Common Stock to be issued by the Company under the Incentive Plan, when issued and sold in accordance with the terms of the Incentive Plan, will be validly issued, fully paid and non-assessable. The opinions expressed herein are limited to the Delaware General Corporation Law and we express no opinion as to the effect on the matters covered by this letter of the laws of any other jurisdiction.

We hereby consent to the filing of this letter as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission.

Very truly yours,
/s/ Baker & Hostetler LLP
Baker & Hostetler LLP

Columbus Costa Mesa Dallas Denver Atlanta Chicago Cincinnati Cleveland Houston New York Washington, DC San Francisco Los Angeles Orlando Philadelphia Seattle. Wilmington

Calculation of Filing Fee Tables

S-8 (Form Type)

Pulse Biosciences, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common	457(c)	1,188,657(2)	\$1.69(3)	\$2,008,830	.0000927	\$186.22
	Stock			Total Offering Amounts	\$2,008,830		\$186.22
				-		Total Fee Offsets	*
						Net Fee Due	\$186.22

⁽¹⁾ Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement on Form S-8 (the "Registration Statement") shall also cover any additional shares of common stock of Pulse Biosciences, Inc. (the "Registrant") that may be issued pursuant to the 2017 Equity Incentive Plan (the "Incentive Plan"), by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of the outstanding shares of common stock of the Registrant.

(2) Reflects 1,188,657 additional shares of common stock reserved for issuance pursuant to the Incentive Plan, as amended, as a result of an increase approved by Registrant's board of directors.

⁽³⁾ Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) and Rule 457(h) under the Securities Act, on the basis of \$1.69 per share, which represents the average of the high and low prices of the Common Stock, as reported on the Nasdaq Capital Market on May 12, 2022.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 31, 2022 relating to the financial statements of Pulse Biosciences, Inc. appearing in the Annual Report on Form 10-K of Pulse Biosciences, Inc. for the year ended December 31, 2021.

/s/ Deloitte & Touche LLP

San Jose, California May 13, 2022