

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

AMENDMENT NO. 3

TO

FORM S-3

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 (510) 906-4600	

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Darrin R. Uecker
 President and Chief Executive Officer
 Pulse Biosciences, Inc.
 3957 Point Eden Way
 Hayward, California 94545
 (510) 906-4600

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

Copies to:

Andrew D. Hoffman
 Wilson Sonsini Goodrich & Rosati
 650 Page Mill Road
 Palo Alto, California 94304
 (650) 493-9300

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

From time to time, after the effective date of this Registration Statement
 (Approximate date of commencement of proposed sale to the public)

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has selected 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 Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Units consisting of shares of the Registrant's common stock, \$0.001 par value per share and warrants to purchase shares of common stock	\$30,000,000	\$3,894.00(1)
Subscription rights to purchase units(2)	—	—
Common stock included as part of the units	Included with Units above	—
Warrants to purchase common stock included as part of the units(3)	Included with Units above	—
Common stock issuable upon exercise of the warrants(4)	\$ 4,500,000	\$ 584.10
Total	\$34,500,000	\$4,478.10(5)

- Calculated pursuant to Rule 457(o) of the Securities Act of 1933, as amended (the "Securities Act"), based on an estimate of the proposed maximum offering price. Pursuant to Rule 457(g) under the Securities Act, no separate registration fee is required for the units because the units are being registered in the same registration statement as the common stock of the registrant underlying the units.
- The non-transferable subscription rights to purchase units are being issued without consideration. Pursuant to Rule 457(g) under the Securities Act, no separate registration fee is required for the rights because the rights are being registered in the same registration statement as the securities of the registrant underlying the rights.
- Pursuant to Rule 457(g) under the Securities Act, no separate registration fee is required for the warrants because the warrants are being registered in the same registration statement as the common stock of the registrant issuable upon exercise of the warrants.
- In addition to the shares of common stock set forth in this table, pursuant to Rule 416 under the Securities Act, this registration statement also registers such indeterminate number of shares of common stock as may become issuable upon exercise of the warrants as the same may be adjusted as a result of stock splits, stock dividends, recapitalizations or other similar transactions.
- The Registrant previously paid \$3,894.00 of the registration fee with prior filings of the Registration Statement.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED MAY 1, 2020

PROSPECTUS



**Pulse Biosciences, Inc.
Subscription Rights to Purchase Up to \$30,000,000 of Units
Each Unit Consisting of 1 Share of Common Stock
and 0.15 Warrants to Purchase Shares of Common Stock
(and Up to \$4,500,000 of Shares of Common Stock Underlying the Warrants)**

Pulse Biosciences, Inc. is distributing at no charge to the holders of our common stock, par value \$0.001 per share, non-transferable subscription rights to purchase up to \$30,000,000 of Units. The subscription price per Unit shall be equal to the lesser of (i) \$7.01 (the "Initial Price") and (ii) the volume weighted average price of our common stock for the five trading day period through and including the Expiration Date (as defined below) (the "Alternate Price"), as provided herein. Each stockholder will receive one subscription right entitling the holder to purchase [•] Units at the Initial Price, for each share of our common stock owned at 5:00 p.m., Eastern Time, on May 14, 2020. Each Unit shall consist of one share of our common stock and 0.15 warrants to purchase shares of our common stock. Each warrant will be exercisable for one share of our common stock at an exercise price that shall be equal to the subscription price for the Units. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units, but we will not sell fractional Units. If you fully exercise your basic subscription right and other stockholders do not fully exercise their basic subscription rights, you may also exercise an over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to the availability and pro rata allocation of shares among persons exercising this over-subscription right. The common stock and warrants comprising the Units will separate upon the closing of this rights offering and will be issued separately; however, they may only be purchased as a Unit and the Unit will not trade as a separate security.

The purpose of this rights offering is to raise equity capital in a cost-effective manner that provides all of our existing stockholders the opportunity to participate. The net proceeds will be used for general working capital purposes, including the ongoing investment in current and future clinical studies evaluating the safety and efficacy of Pulse Biosciences' proprietary Nano-Pulse Stimulation™ (NPS) technology, the development and enhancement of Pulse Biosciences' CellFX® (CellFX) System, obtaining regulatory clearance for our CellFX System, sales and marketing activities and general corporate operations.

The subscription rights will be distributed and exercisable beginning on May 14, 2020, the record date of this rights offering. The subscription rights will expire and will have no value if they are not exercised prior to the expiration date of this rights offering, which is currently expected to be 5:00 p.m. Eastern Time, on June 8, 2020 (the "Expiration Date"), unless we, in our sole discretion, extend the period for exercising the subscription rights. We will extend the duration of the rights offering as required by applicable law, and may choose to extend the rights offering if we decide that changes in the market price of our common stock warrant an extension or if we decide that the degree of participation in this rights offering by holders of our common stock is less than the level we desire. You should carefully consider whether or not to exercise your subscription rights before the Expiration Date. We reserve the right to cancel the rights offering at any time before the expiration of the rights offering, for any reason.

Robert W. Duggan, chairman of our board of directors and the beneficial owner of approximately 43% of our outstanding common stock prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so.

There is no minimum number of Units that we must sell in order to complete the rights offering. If you exercise your rights in full, you may also exercise an over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to the availability and allocation of Units among persons exercising this over-subscription right and certain other limitations as further described elsewhere in this prospectus. Stockholders who do not participate in the rights offering will continue to own the same number of shares, but will own a smaller percentage of the total shares outstanding after the rights offering to the extent that other stockholders participate in the rights offering. Rights that are not exercised by the Expiration Date will expire and have no value.

We are distributing the rights and offering the underlying securities directly to you. We have not employed any brokers, dealers or underwriters in connection with the solicitation or exercise of rights in the rights offering and no commissions, fees or discounts will be paid in connection with the rights offering. Broadridge Corporate Issuer Solutions, Inc. is acting as the subscription agent and information agent for the rights offering and warrant agent for the warrants. While certain of our directors, officers and other employees may solicit responses from you, those directors, officers and other employees will not receive any commissions or compensation for their services other than their normal compensation.

The subscription rights and Units may not be sold or transferred except as required by operation of law.

Our common stock is listed on the Nasdaq Capital Market under the symbol "PLSE." On April 30, 2020, the last reported sale price for our common stock on the Nasdaq Capital Market was \$11.23 per share. We do not intend to apply for listing of the warrants offered hereby.

Investing in our common stock involves risks. You should carefully review and consider the information contained in this prospectus, including the risk factors beginning on page 20 of this prospectus, as well as the risk factors and other information contained in any documents we incorporate by reference into this prospectus before exercising your subscription rights. See "Where You Can Find Additional Information" beginning on page 50. Neither the Securities and

Exchange Commission nor any state securities regulators have approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is [•], 2020.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission (the “SEC”). Under this registration statement, we may distribute, at any time and from time to time, in one or more offerings, non-transferable subscription rights to purchase up to \$30,000,000 of Units consisting of shares of our common stock and warrants, as described elsewhere in this prospectus.

You should only rely on the information contained or incorporated by reference in this prospectus. No person has been authorized to give any information or make any representations other than those contained or incorporated by reference in this prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us or the selling stockholders.

You should read the entire prospectus, as well as the documents incorporated by reference into this prospectus, before making an investment decision. Neither the delivery of this prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein is correct as of any date subsequent to the date hereof, as applicable. You should assume that the information appearing in this prospectus, or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

This prospectus is neither an offer to sell nor a solicitation of an offer to buy any securities other than those registered by this prospectus, nor it is an offer to sell or a solicitation of an offer to buy securities in any jurisdiction where an offer or solicitation would be unlawful.

Unless the context requires otherwise, references in this prospectus to “Pulse,” “Pulse Biosciences,” the “Company,” “we,” “us” and “our” refer to Pulse Biosciences, Inc., a Delaware corporation, and our consolidated subsidiaries, unless expressly indicated or the context otherwise requires. This prospectus, including the documents incorporated herein by reference, contains references to a number of trademarks that are our registered trademarks or those of our affiliates, or trademarks for which we or our affiliates have pending registration applications or common law rights. This prospectus may also include trade names, trademarks and service marks of other companies and organizations. Pulse Biosciences, CellFX, Nano-Pulse Stimulation, NPS and the stylized logos are among the trademarks and/or registered trademarks of Pulse Biosciences, Inc. in the United States (U.S.) and in other countries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes “forward-looking statements,” as such term is used within the meaning of the Private Securities Litigation Reform Act of 1995. These “forward-looking statements” are not based on historical fact and involve assessments of certain risks, developments, and uncertainties in our business looking to the future. Such forward-looking statements can be identified by the use of terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “anticipate,” “estimate,” “intend,” “continue,” “plan,” “potential,” or “believe,” or the negatives or other variations of these terms or comparable terminology. Forward-looking statements may include projections, forecasts, or estimates of future performance and developments. Forward-looking statements contained in this prospectus are based upon assumptions and assessments that we believe to be reasonable as of the date of this prospectus. Whether those assumptions and assessments will be realized will be determined by future factors, developments, and events, which are difficult to predict and may be beyond our control. Actual results, factors, developments, and events may differ materially from those we assumed and assessed. Risks, uncertainties, contingencies, and developments, including those identified in the section titled “Risk Factors” beginning on page [20](#) of this prospectus and in our most recent Annual Report on Form 10-K, subsequent quarterly reports on Form 10-Q and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), incorporated by reference herein, could cause our future operating results to differ materially from those set forth in any forward-looking statement. There can be no assurance that any such forward-looking statement, projection, forecast or estimate contained can be realized or that actual returns, results, or business prospects will not differ materially from those set forth in any forward-looking statement. Given these uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. We disclaim any obligation to update any such factors or to publicly announce the results of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments.

PROSPECTUS SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated in this prospectus by reference. This summary does not contain all of the information you should consider before investing in our Units, warrants or common stock. You should carefully read this entire prospectus, including each of the documents incorporated herein or therein by reference, before making an investment decision.

Overview

We are a novel bioelectric medicine company committed to health innovation that improves and potentially extends the lives of patients. We are pursuing regulatory clearance from the U.S. Food and Drug Administration (“FDA”) to market our first product, our proprietary CellFX[®] (“CellFX”) System. The CellFX System utilizes its patented Nano-Pulse Stimulation[™] (“NPS”) technology to treat a variety of applications for which an optimal solution remains unfulfilled. NPS is a proprietary technology that delivers nanosecond duration pulses of high amplitude electrical energy to non-thermally clear targeted cells while sparing adjacent non-cellular tissue. The cell-specific effects of NPS technology have been validated in a series of completed and ongoing clinical studies.

We have incurred substantial operating losses and have used cash in our operating activities since inception. Our ability to continue as a going concern over the next twelve months following this registration statement is dependent upon raising financing from this rights offering or other means to maintain current operations and continue research and development efforts. Based on our current operating plan, if we are not successful in raising funds in this rights offering or by other means, we believe we will not have sufficient cash and cash equivalents on hand to support current operations for at least twelve months from the date of this prospectus. To finance our operations beyond that point, we will need to raise additional capital, which cannot be assured. There is no assurance that this rights offering will be successful, or that additional financing will be available when needed or that management will be able to obtain financing on terms acceptable to us.

Robert W. Duggan, the beneficial owner of approximately 43% of our outstanding common formal stock prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so. If other stockholders do not exercise their subscription rights and Mr. Duggan exercises all of his subscription rights, Mr. Duggan would be the only stockholder to subscribe for Units in connection with this rights offering, which would result in Mr. Duggan becoming the beneficial owner of approximately [•]% of our common stock (assuming no exercise of the warrants to purchase shares of common stock acquired in this offering). Mr. Duggan’s beneficial ownership following the completion of the rights offering, assuming no other stockholders subscribe for Units and Mr. Duggan exercises all of his subscription rights, is calculated by adding 9,043,648, which is the number of shares Mr. Duggan owned prior to this rights offering to [•], which is the approximate number of shares we will issue as a result of this rights offering assuming (i) no additional shares of common stock are issued by us prior to consummation of the rights offering, (ii) all offered Units (which consist of shares of common stocks and warrants) are sold in the rights offering at the Initial Price and (iii) no exercises of the warrants to purchase shares of common stock issued in this offering. Percentages are calculated based on [•] shares of common stock outstanding as of [•], 2020. If Mr. Duggan acquires a majority of our common stock, we would be considered a “controlled” company under the Nasdaq Stock Market rules and would be exempt from the obligation to comply with certain Nasdaq Stock Market corporate governance requirements.

Our long-term success is dependent upon our ability to successfully develop, commercialize, and market our products and technologies, earn revenue, obtain additional capital when needed, and ultimately achieve profitable operations. As of December 31, 2019, we had cash, cash equivalents and investments of \$25.4 million. During the twelve months ended December 31, 2019, we incurred a net loss of \$47.0 million and used \$34.2 million in cash for operating activities. In addition, we had an accumulated deficit of \$122.7 million as of December 31, 2019.

Corporate Information

Pulse Biosciences, Inc., formerly Electroplate, Inc., was incorporated in the State of Nevada on May 19, 2014, and was reincorporated in the State of Delaware on June 18, 2018. Our corporate offices are located at 3957 Point Eden Way, Hayward, California 94545, and our telephone number is (510) 906-4600. We maintain a website at www.pulsebiosciences.com where general information about us is available. Our website, and the information contained therein, or that can be accessed through, our website, is not a part of this prospectus, and the inclusion of our website address is an inactive textual reference only.

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) as well as a “smaller reporting company.” We will remain an emerging growth company until the earliest to occur of (1) the last day of the fiscal year in which we have \$1.07 billion or more in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates; (3) the date on which we have issued, in any three-year period, more than \$1.0 billion in non-convertible debt securities; or (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

The Offering

Securities Offered

We are distributing to you, at no charge, one non-transferable subscription right to purchase [*] Units at the Initial Price (as defined below) for each share of our common stock that you owned as of 5:00 p.m., Eastern Time, on May 14, 2020, either as a holder of record or, in the case of shares held of record by custodian banks, brokers, dealers or other nominees on your behalf, as a beneficial owner of such shares. Each Unit consists of one share of our common stock and 0.15 warrants to purchase shares of our common stock. To the extent that the Alternate Price (as defined below) is lower than the Initial Price, we sell issue additional Units.

The shares of common stock and warrants comprising the Units sold in this rights offering will be issued only in book-entry form. The common stock and warrants comprising the Units will separate upon the closing of this rights offering and will be issued separately; however, they may only be purchased as a Unit and the Unit will not trade as a separate security. The subscription rights and Units will not be transferable.

Each warrant entitles the holder to purchase one share of our common stock at an exercise price that shall be equal to the subscription price for the Units. The exercise price must be paid in cash at the time of exercise and there is no “cashless” exercise provision for the warrants. Each warrant will be exercisable immediately upon completion of this rights offering and will expire on the fifth anniversary of the completion of this rights offering.

The warrants will be subject to redemption by the Company for \$0.01 per warrant, on not less than 30 days written notice, if the volume weighted average price of our common stock equals or exceeds 200% of the exercise price for the warrants, subject to adjustment, per share, for 10 consecutive trading days, provided that we may not redeem the warrants prior to the date that is six months after the issuance date.

	<p>The warrants will be adjusted to reflect any stock split, stock dividend or similar recapitalization with respect to the common stock.</p> <p>We do not intend to list the warrants on any securities exchange or other trading market.</p>
Basic Subscription Rights	<p>Each subscription right will entitle the holder to purchase [•] Units at the Initial Price which shall be paid in cash, with each Unit consisting of one share of our common stock and 0.15 warrants to purchase shares of our common stock. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units.</p>
Over-Subscription Rights	<p>We do not expect that all of our stockholders will exercise all of their basic subscription rights. If you fully exercise your basic subscription right and other stockholders do not fully exercise their basic subscription rights, the over-subscription right of each right entitles you to subscribe for additional Units unclaimed by other holders of rights in this rights offering at the same subscription price per Unit. If an insufficient number of Units is available to fully satisfy all over-subscription right requests, the available Units will be distributed proportionately among rights holders who exercise their over-subscription right based on the number of Units each rights holder subscribed for under the basic subscription right. The proration process will be repeated until all Units have been allocated or all over-subscription exercises have been fulfilled, whichever occurs earlier.</p>
Subscription Price	<p>The subscription price per Unit will be the lesser of (i) \$7.01 (the “Initial Price”) and (ii) the volume weighted average price of our common stock for the five trading day period through and including the Expiration Date (as defined below) (the “Alternate Price”). Subscribers must fund their subscriptions pursuant to both the basic subscription right and over-subscription right at the Initial Price. To be effective, any payment related to the exercise of a right must clear prior to the expiration of the rights offering.</p>
Excess Subscription Amount	<p>If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid by a subscriber (the “Excess Subscription Amount”) will be put towards the purchase of additional Units. For more information, see “Questions and Answers About the Rights Offering” below.</p>
Record Date	<p>5:00 p.m., Eastern Time, on May 14, 2020.</p>
Expiration of the Rights Offering	<p>5:00 p.m., Eastern Time, on June 8, 2020 (the “Expiration Date”), subject to extension or earlier termination.</p>
Amendment, Extension and Termination	<p>We have the option to extend the rights offering and the period for exercising your subscription rights, although we do not presently intend to do so. The board of</p>

No Fractional Units, Shares or Warrants	<p>directors, in its sole discretion, reserves the right to amend or modify the terms of the rights offering. We also reserve the right to terminate the rights offering at any time prior to the Expiration Date for any reason, in which event all funds received in connection with the rights offering will be returned without interest or deduction to those persons who exercised their subscription rights.</p> <p>We will not sell fractional Units, shares or warrants but rather will round down the aggregate number of Units, shares or warrants you are entitled to receive to the nearest whole number. As each Unit corresponds to one share of common stock, the number of shares of common stock issued to you will correspond to the whole number of Units you receive. The number of warrants issued to you will be calculated by rounding down to the nearest whole number the product computed by multiplying the number of Units subscribed for in the rights offering by a factor of 0.15. For more information about how the number of warrants is computed, see “Questions and Answers About the Rights Offering — What happens if the final subscription price is less than the Initial Price?”</p> <p>Any Excess Subscription Amount resulting from the reduction of the subscription price from the Initial Price to the Alternate Price will be put towards the purchase of additional Units (either towards your basic subscription right, if available, or towards the over-subscription right if you have already exercised your basic subscription right in full). The excess amount for any fractional Units will be returned to you as soon as practicable, in the form in which made. You will not receive interest or a deduction on any payments refunded to you under the rights offering. You will not receive a refund or other compensation for any unissued fractional warrants.</p>
Non-Transferability of Rights	<p>The subscription rights and Units may not be sold, transferred or assigned and will not be listed for trading on the Nasdaq Capital Market or any other stock exchange or trading market.</p>
Procedure for Exercising Rights	<p>You may exercise your subscription rights by properly completing and executing your rights certificate and delivering it, together with the subscription price for each Unit for which you subscribe under the basic subscription right and over-subscription right, to the subscription agent, Broadridge Corporate Issuer Solutions, Inc., on or prior to the Expiration Date. If you use mail, we recommend that you use insured, registered mail, with return receipt requested.</p>
How Rights Holders Can Exercise Rights Through Others	<p>If you hold our common stock through a custodian bank, broker, dealer, or other nominee, we will ask your custodian bank, broker, dealer or other nominee to notify you of the rights offering. If you wish to exercise your rights, you will need to have your custodian bank, broker, dealer or other nominee act for you. To indicate your</p>

<p>How Foreign Stockholders and Other Stockholders Can Exercise Rights</p>	<p>decision, you should complete and return to your custodian bank, broker, dealer or other nominee the form entitled “Beneficial Owners Election Form.” You should receive this form from your custodian bank, broker, dealer or other nominee with the other rights offering materials. You should contact your custodian bank, broker, dealer or other nominee if you believe you are entitled to participate in the rights offering but you have not received this form.</p>
<p>No Revocation</p>	<p>The subscription agent will not mail rights certificates to you if you are a stockholder whose address is outside the United States or if you have an Army Post Office or a Fleet Post Office address. Instead, we will have the subscription agent hold the subscription rights certificates for your account. To exercise your rights, you must notify the subscription agent prior to 11:00 a.m., Eastern Time, at least three (3) business days prior to the Expiration Date, and establish to the satisfaction of the subscription agent that it is permitted to exercise your subscription rights under applicable law. If you do not follow these procedures by such time, your rights will expire and will have no value.</p> <p>Once you submit the form of rights certificate to exercise any subscription rights, you may not revoke or change your exercise or request a refund of monies paid. All exercises of rights are irrevocable, even if you subsequently learn information about us that you consider to be unfavorable. You should not exercise your subscription rights unless you are certain that you wish to purchase Units in the rights offering.</p>
<p>Payment Adjustments</p>	<p>If you send a payment that is insufficient to purchase the number of Units requested, or if the number of Units requested is not specified in the rights certificate, the payment received will be applied to exercise your subscription rights to the extent of the payment. If the payment exceeds the amount necessary for the full exercise of your subscription rights, including any over-subscription rights exercised and permitted and, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amount will be put towards the purchase of additional Units (either towards your Basic Subscription Right, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Right in full). Otherwise, the excess will be returned to you as soon as practicable, in the form in which made. You will not receive interest or a deduction on any payments refunded to you under the rights offering.</p>
<p>Conditions</p>	<p>See “The Rights Offering — Conditions to the Rights Offering” beginning on page 37.</p>
<p>Purchase Commitments</p>	<p>Robert W. Duggan, the beneficial owner of approximately 43% of our outstanding common stock</p>

prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so. If other stockholders do not exercise their subscription rights, and Mr. Duggan exercises all of his subscription rights, Mr. Duggan would be the only stockholder to subscribe for Units in connection with this rights offering, which would result in Mr. Duggan becoming the beneficial owner of approximately [•]% of our common stock (assuming no exercise of the warrants to purchase shares of common stock issued in this offering). See the subsection titled “Overview” above for information on how this percentage is calculated.

No Recommendation to Rights Holders

Although our directors are investing their own money in the rights offering, our board of directors is making no recommendation regarding your exercise of the subscription rights. You are urged to make your decision based on your own assessment of our business and the rights offering. An investment in Units must be made according to your evaluation of your own best interests and after considering all of the information herein, including the section titled “Risk Factors” beginning on page [20](#) of this prospectus. Neither we nor our board of directors are making any recommendation regarding whether you should exercise your subscription rights.

Use of Proceeds

Although we cannot determine what the actual net proceeds from the sale of the Units in the rights offering will be until the rights offering is completed, assuming all subscription rights are exercised, we estimate that the aggregate net proceeds from the rights offering, after deducting estimated offering expenses, will be approximately \$29.5 million (excluding the proceeds from any warrants which may be exercised following the completion of the rights offering). We currently intend to use the net proceeds from this offering, if any, for general working capital purposes, including the ongoing investment in current and future clinical studies evaluating the safety and efficacy of Pulse Biosciences’ proprietary NPS technology, the development and enhancement of Pulse Biosciences’ CellFX System, obtaining regulatory clearance for our CellFX System, sales and marketing activities and general corporate operations. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. See “Use of Proceeds” beginning on page [30](#).

**Material U.S. Federal Income Tax
Consequences.**

Although the authorities governing transactions such as this rights offering are complex and unclear in certain

Delivery of shares and warrants	<p>respects, we believe and intend to take the position that the distribution of subscription rights to you with respect to your shares of common stock should generally be treated, for U.S. federal income tax purposes, as a non-taxable distribution if you are a U.S. taxpayer. For a detailed discussion, see “Material U.S. Federal Income Tax Consequences” beginning on page 44. You should consult your tax advisor as to the particular consequences to you of the rights offering.</p>
Listing of Common Stock	<p>As soon as practicable after the expiration of the rights offering, the subscription agent will arrange for the issuance of the shares of common stock and warrants received pursuant to the rights offering. All shares and warrants that are purchased in the rights offering will be issued in book-entry, or uncertificated, form meaning that you will receive a direct registration (DRS) account statement from our transfer agent reflecting ownership of these securities if you are a holder of record of shares. If you hold your shares in the name of a custodian bank, broker, dealer, or other nominee, the Depository Trust Company (DTC) will credit your account with your nominee with the securities you purchased in the rights offering.</p>
Fees and Expenses	<p>Our common stock is listed on the Nasdaq Capital Market under the symbol “PLSE.” The shares of common stock to be issued in connection with the rights offering will also be listed on the Nasdaq Capital Market under the same symbol. The subscription rights, Units and warrants will not be listed for trading on the Nasdaq Capital Market or any other stock exchange or market.</p>
Treatment of Outstanding Warrants	<p>We are not charging any fee or sales commission to issue subscription rights to you or to sell Units to you if you exercise your subscription rights (other than the subscription price). If you exercise your subscription rights through a custodian bank, broker, dealer or other nominee, you are responsible for paying any fees your nominee may charge you.</p>
Subscription Agent	<p>As of December 31, 2019, we had outstanding warrants to purchase an aggregate of 167,847 additional shares of common stock. Holders of our warrants may not participate in the rights offering without first exercising their warrants for shares of common stock.</p>
Information Agent	<p>Broadridge Corporate Issuer Solutions, Inc.</p> <p>You should direct any questions or requests for assistance concerning the method of subscribing for Units or for additional copies of this prospectus the information agent, Broadridge Corporate Issuer Solutions, Inc., toll free at 1-888-789-8409, by e-mail at shareholder@broadridge.com, or by mail at:</p> <p style="text-align: center;">Broadridge Corporate Issuer Solutions, Inc. Attn: BCIS Re-Organization Dept. P.O. Box 1317 Brentwood, NY 11717-0718</p>

Risk Factors

Before investing in our Units, you should carefully read and consider the information set forth in “Risk Factors” beginning on page [20](#) of this prospectus and all other information appearing elsewhere and incorporated by reference in this prospectus.

No “Going Private” Transaction

The rights offering is not a transaction or series of transactions which has either a reasonable likelihood or a purpose of producing a “going private effect” as specified in Rule 13e-3 of the Exchange Act.

For additional information concerning the rights offering, see “The Rights Offering,” beginning on page [35](#).

The information set forth in this prospectus is based on 20,825,469 shares of common stock outstanding as of December 31, 2019, and assumes that no options or warrants are exercised, RSUs vest, new options are issued under our equity incentive plans or we otherwise issue additional shares of common stock prior to consummation of the rights offering, and assumes no exercise of the warrants to be issued in this rights offering.

QUESTIONS AND ANSWERS ABOUT THE RIGHTS OFFERING

The following are examples of what we anticipate will be common questions about the rights offering. The answers are based on selected information included elsewhere in this prospectus. The following questions and answers do not contain all of the information that may be important to you and may not address all of the questions that you may have about the rights offering. This prospectus and the documents incorporated by reference contain more detailed descriptions of the terms and conditions of the rights offering and provide additional information about us and about our business, including potential risks related to the rights offering, our common stock, and our business.

Exercising the subscription rights and investing in our securities involve a high degree of risk. We urge you to carefully read the section titled “Risk Factors” beginning on page [20](#) of this prospectus and all other information included in, or incorporated by reference into, this prospectus in its entirety before you decide whether to exercise your subscription rights.

Q: What is the rights offering?

A: We are distributing to you, at no charge, one non-transferable subscription right to purchase [\bullet] Units for each share of our common stock that you owned as of 5:00 p.m., Eastern Time, on May 14, 2020, either as a holder of record or, in the case of shares held of record by custodian banks, brokers, dealers or other nominees on your behalf, as a beneficial owner of such shares.

Q: Why are we conducting the rights offering?

A: The purpose of this rights offering is to raise equity capital in a cost-effective manner that provides all of our existing stockholders the opportunity to participate. We are conducting the rights offering to provide for our general working capital purposes, including the ongoing investment in current and future clinical and pre-clinical studies evaluating the safety and efficacy of Pulse Biosciences’ proprietary NPS technology, the development and enhancement of Pulse Biosciences’ CellFX System, obtaining regulatory clearance for our CellFX System, sales and marketing activities and general corporate operations. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary business, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. For a detailed discussion, see “Use of Proceeds” beginning on page [30](#).

Q: What is a Unit?

A: Each Unit consists of one share of our common stock and 0.15 warrants to purchase shares of our common stock. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units, but we will not sell fractional Units. The common stock and warrants comprising the Units will separate upon the closing of this rights offering and will be issued separately; however, they may only be purchased as a Unit and the Unit will not trade as a separate security.

Q: What are the terms of the warrants?

A: Each warrant entitles the holder to purchase one share of our common stock at an exercise price that shall be equal to the subscription price for one Unit. The exercise price must be paid in cash at the time of exercise and there is no “cashless” exercise provision for the warrants. Each warrant will be exercisable immediately upon completion of this rights offering and will expire on the fifth anniversary of the completion of this rights offering.

The warrants will be subject to redemption by the Company for \$0.01 per warrant, on not less than 30 days written notice, if the volume weighted average price of our common stock equals or exceeds 200% of the exercise price for the warrants, subject to adjustment, per share, for 10 consecutive trading days, provided that we may not redeem the warrants prior to the date that is six months after the issuance date.

The warrants will be adjusted to reflect any stock split, stock dividend or similar recapitalization with respect to the common stock.

Q: Are the warrants listed?

A: The warrants will not be listed for trading on Nasdaq or any other securities exchange or market. The warrants will be issued in registered form under a warrant agency agreement with Broadridge Corporate Issuer Solutions, Inc., as warrant agent.

Q: *Will fractional shares be issued upon exercise of subscription rights or upon the exercise of warrants?*

A: No. As we will not sell fractional Units, and each Unit is comprised of one share of common stock, we will not issue fractional shares of common stock in the rights offering. Rights holders will only be entitled to purchase a whole number of Units, representing a whole number of shares of common stock, rounded down to the nearest whole number of Units a holder would otherwise be entitled to purchase. Rights holders will also only be entitled to such number of warrants calculated by rounding down to the nearest whole number the product computed by multiplying the number of Units to which a rights holder is entitled by a factor of 0.15. Any Excess Subscription Amount resulting from the reduction of the subscription price from the Initial Price to the Alternate Price will be put towards the purchase of additional Units (either towards your basic subscription right, if available, or towards the over-subscription right if you have already exercised your basic subscription right in full). The excess amount for any fractional Units will be returned to you as soon as practicable, in the form in which made. You will not receive interest or a deduction on any payments refunded to you under the rights offering. You will not receive a refund or other compensation for any unissued fractional warrants.

Q: *How was the subscription price determined?*

A: In determining the subscription price, our board of directors, with the advice and input of management and advisors, considered a number of factors, including: the likely cost of capital from other sources and general conditions of the securities markets, the price at which our stockholders might be willing to participate in the rights offering, historical and current trading prices for our common stock, our need for liquidity and capital, the value of the warrants being issued as a component of the Unit and the desire to provide an opportunity to our stockholders to participate in the rights offering on a pro rata basis. In conjunction with its review of these factors, our board of directors also reviewed a range of subscription prices in various prior rights offerings of public companies. The subscription price is not necessarily related to our book value, net worth or any other established criteria of value and may or may not be considered the fair value of the Units to be offered in the rights offering. You should not consider the subscription price as an indication of value of us or our common stock. The market price of our common stock may decline during or after the rights offering, including below the subscription price for the Units. You should obtain a current quote for our common stock before exercising your subscription rights and make your own assessment of our business and financial condition, our prospects for the future, and the terms of the rights offering.

Q: *Why did our board of directors elect to price the rights offering at the lesser of the Initial Price and the Alternate Price?*

A: The price of the Units is based on the market price of our common stock. Our board of directors elected to price the rights offering at the lesser of the Initial Price and the Alternate Price to attempt to protect stockholders from any decline in the price of the Company's common stock, which may occur after the commencement of the rights offering and prior to the Expiration Date. While there is no guarantee that this mechanism will sufficiently protect stockholders that exercise their rights (see "Risk Factors" below), our board of directors and management wanted to encourage participation in the offering and strike what they believe to be a fair balance between the capital needs of the Company and the fair value of the Units sold to the stockholders in this offering.

Q: *Because the final subscription price may not be determined until the Expiration Date, how much money should I send to the subscription agent if I want to exercise my rights?*

A: For purposes of initially exercising your rights, you should assume that the subscription price will equal the Initial Price of \$7.01 per Unit. Accordingly, for each right that you would like to exercise, including any rights that you would like the opportunity to exercise pursuant to the over-subscription right, you should send \$7.01 per Unit, noting that each subscription right corresponds to [•] Units at the Initial Price. For assistance you may contact the information agent, Broadridge Corporate Issuer Solutions, Inc., toll free at 1-888-789-8409 or by e-mail at shareholder@broadridge.com.

Q: *What happens if the final subscription price is less than the Initial Price?*

A: If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amounts will be put towards the purchase of additional Units. For example, assume that the initial subscription price is \$5.00 per Unit, with each Unit consisting of 1 share of our common stock and 0.15 warrants to purchase shares of our common stock. If you want to exercise your rights to purchase 100 Units, you will promptly send payment

to the subscription agent in the amount of \$500. If the final subscription price remains at \$5.00 per Unit, you will receive 100 Units, consisting of 100 shares of common stock and 15 warrants to purchase common stock. If the final subscription price decreases to \$4.00 per Unit, you will receive 125 Units rather than 100 Units, consisting of 125 shares of common stock and 18 warrants, and you will not receive any cash back. The excess amount for any fractional Units will be returned to you as soon as practicable, in the form in which made. You will not receive interest or a deduction on any payments refunded to you under the rights offering. You will not receive a refund or other compensation for any unissued fractional warrants. Detailed instructions to exercise your rights, including regarding payment of the subscription price, are also included on your rights certificate. For assistance you may contact the information agent, Broadridge Corporate Issuer Solutions, Inc., toll free at 1-888-789-8409 or by e-mail at shareholder@broadridge.com.

Q: *What is the basic subscription right?*

A: Each subscription right gives our stockholders the right to purchase [•] Units at the Initial Price, each Unit consisting of one share of our common stock and 0.15 warrants to purchase shares of our common stock, which shall be payable in cash and subject to the limits described below. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units. We have granted to you, as a stockholder of record as of 5:00 p.m., Eastern Time, on the record date, one subscription right for each share of our common stock you owned at that time. For example, if you owned 100 shares of our common stock as of 5:00 p.m., Eastern Time, on the record date, you would have received 100 subscription rights corresponding to [•] Units at the Initial Price, and the Units would altogether consist of [•] shares of common stock and [•] warrants, subject to certain limitations. You may exercise all or a portion of your basic subscription rights or you may choose not to exercise any subscription rights at all. However, if you exercise fewer than all of your basic subscription rights, you will not be entitled to purchase any additional Units pursuant to the over-subscription right.

Q: *What is the over-subscription right?*

A: We do not expect all of our stockholders to exercise all of their basic subscription rights. The over-subscription right provides stockholders that exercise all of their basic subscription rights the opportunity to purchase the Units that are not purchased by other stockholders. If you fully exercise your basic subscription right, the over-subscription right of each right entitles you to subscribe for additional Units unclaimed by other holders of rights in this rights offering at the same subscription price per Unit. If an insufficient number of Units is available to fully satisfy all over-subscription right requests, the available Units will be distributed proportionately among rights holders who exercise their over-subscription right based on the number of Units each rights holder subscribed for under the basic subscription right. The proration process will be repeated until all Units have been allocated or all over-subscription exercises have been fulfilled, whichever occurs earlier.

In order to properly exercise your over-subscription right, you must deliver the subscription payment for exercise of your over-subscription right before the expiration of the rights offering. Because we will not know the total number of unsubscribed Units before the expiration of the rights offering, if you wish to maximize the number of Units you purchase pursuant to your over-subscription right, you will need to deliver payment in an amount equal to the aggregate subscription price for the maximum number of Units available, assuming that no stockholder other than you has purchased any Units pursuant to such stockholder's basic subscription right and over-subscription right. Any excess subscription payments received by the subscription agent caused by proration will be returned by the subscription agent to you by mail, without interest or penalty, as soon as practicable after the Expiration Date of the rights offering. The subscription agent will return any excess payments in the form in which it was made. Any Excess Subscription Amount resulting from the reduction of the subscription price from the Initial Price to the Alternate Price will be put towards the purchase of additional Units (either towards your basic subscription right, if available, or towards the over-subscription right if you have already exercised your basic subscription right in full). See "The Rights Offering — Subscription Rights — Over-Subscription Rights" beginning on page [35](#).

Q: *Who will receive subscription rights?*

A: Holders of our common stock will receive one non-transferable subscription right for each share of common stock owned as of May 14, 2020, the record date.

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Q: How many Units may I purchase if I exercise my subscription rights?

A: You will receive one non-transferable subscription right for each share of our common stock that you owned on May 14, 2020, the record date. Each subscription right evidences a right to purchase [•] Units at the Initial Price, which shall be paid in cash. To the extent that the Alternate Price is lower than the Initial price, we will sell additional Units. You may exercise any number of your subscription rights.

Q: Am I required to subscribe in the rights offering?

A: No.

Q: What happens if I choose not to exercise my subscription rights?

A: If you choose not to exercise your subscription rights, you will retain your current number of shares of common stock of Pulse Biosciences. If other stockholders fully exercise their subscription rights or exercise a greater proportion of their subscription rights than you exercise, the percentage of our common stock owned by these other stockholders will increase relative to your ownership percentage, and your voting and other rights in the Company will likewise be diluted. Further, the shares issuable upon the exercise of the warrants to be issued pursuant to the rights offering will dilute the ownership interest of stockholders not participating in this rights offering or holders of warrants who have not exercised them.

Q: Am I required to exercise all of the subscription rights I receive in the rights offering?

A: No. You may exercise any number of your subscription rights, or you may choose not to exercise any subscription rights. If you do not exercise any subscription rights, the number of shares of our common stock you own will not change; however, you will own a smaller proportional interest in us than if you had timely exercised all or a portion of your subscription rights. If you choose not to exercise your subscription rights or you exercise fewer than all of your subscription rights and other stockholders fully exercise their subscription rights or exercise a greater proportion of their subscription rights than you exercise, the percentage of our common stock owned by these other stockholders will increase relative to your ownership percentage, and your voting and other rights in us will likewise be diluted. In addition, if you do not exercise your basic subscription right in full, you will not be entitled to participate in the over-subscription right.

Q: If I am a holder of stock options or warrants, may I participate in the rights offering?

A: No. Holders of outstanding stock options or warrants on the record date will not be entitled to participate in the rights offering, except to the extent they hold shares of our common stock on the record date.

Q: Will the equity awards of our employees, officers and directors automatically convert into common stock in connection with the rights offering?

A: No, equity awards will not automatically convert into common stock. Holders of our equity awards, including outstanding stock options and restricted stock units, will not receive rights in the rights offering in connection with such equity awards, but will receive subscription rights in connection with any shares of our common stock held as of the record date.

Q: How soon must I act to exercise my subscription rights?

A: If you received a rights certificate and elect to exercise any or all of your subscription rights, the subscription agent must receive your completed and signed rights certificate and payment (and your payment must clear) prior to the expiration of the rights offering, which is June 8, 2020, at 5:00 p.m., Eastern Time. If you hold your shares in the name of a custodian bank, broker, dealer or other nominee, your nominee may establish a deadline prior to 5:00 p.m., Eastern Time, on June 8, 2020 by which you must provide it with your instructions to exercise your subscription rights and payment for your Units. Our board of directors may, in its discretion, extend the rights offering one or more times. Our board of directors may cancel or amend the rights offering at any time before its expiration. In the event that the rights offering is cancelled, all subscription payments received will be returned promptly, without interest or penalty.

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Q: *Does Pulse Biosciences need to achieve a minimum participation level in order to complete the rights offering?*

A: No. We may choose to consummate, amend, extend or terminate the rights offering regardless of the number of Units actually purchased.

Q: *Can Pulse Biosciences terminate the rights offering?*

A: Yes. Our board of directors may decide to terminate the rights offering at any time prior to the expiration of the rights offering, for any reason. If we cancel the rights offering, any money received from subscribing stockholders will be refunded as soon as practicable, without interest or a deduction on any payments refunded to you under the rights offering. See “The Rights Offering — Expiration of the Rights Offering and Extensions, Amendments and Termination” beginning on page [36](#).

Q: *May I transfer my subscription rights if I do not want to purchase any Units?*

A: No. Should you choose not to exercise your rights, you may not sell, give away or otherwise transfer your rights. However, rights will be transferable as required by operation of law, for example, upon the death of the recipient.

Q: *When will the rights offering expire?*

A: The subscription rights will expire and will have no value, if not exercised prior thereto, at 5:00 p.m., Eastern Time, on June 8, 2020, unless we decide to extend the rights offering Expiration Date until some later time or terminate it earlier. See “The Rights Offering — Expiration of the Rights Offering and Extensions, Amendments and Termination” beginning on page [36](#). The subscription agent must actually receive all required documents and payments in cash, as provide herein, before the Expiration Date. There is no maximum duration for the rights offering.

Q: *Is there a guaranteed delivery period?*

A: No. There is no guaranteed delivery period in connection with this rights offering, so you must ensure that you properly complete all required steps prior to 5:00 p.m., Eastern Time, on June 8, 2020, unless we decide to extend the rights offering Expiration Date until some later time or terminate it earlier.

Q: *How do I exercise my subscription rights if I own shares in certificate form?*

A: You may exercise your subscription rights by properly completing and executing your rights certificate and delivering it, together in full with the subscription price for each Unit you subscribe for, to the subscription agent on or prior to the Expiration Date. If you use mail, we recommend that you use insured, registered mail, return receipt requested.

If you send a payment that is insufficient to purchase the number of Units you requested, or if the number of Units you requested is not specified in the forms, the payment received will be applied to exercise your subscription rights to the fullest extent possible based on the amount of the payment received, subject to the availability of Units in the rights offering and the elimination of fractional shares. Any excess subscription payments received by the subscription agent will be returned promptly, without interest, following the expiration of the rights offering.

Q: *What form of payment is required to purchase Units?*

A: As described in the instructions accompanying the rights certificate, you must timely pay the full subscription price for the full number of Units you wish to acquire under your subscription rights at the Initial Price by delivering to Broadridge Corporate Issuer Solutions, Inc., the subscription agent for this rights offering, a certified check, bank draft, cashier’s check, personal check that clears before the Expiration Date, money order, or wire transfer of funds.

Please note that funds paid by uncertified personal check may take at least five (5) business days to clear. Accordingly, if you wish to pay by means of an uncertified personal check, we urge you to make payment sufficiently in advance of the Expiration Date to ensure that the subscription agent receives cleared funds before that time.

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Q: *What should I do if I want to participate in the rights offering but my shares are held in the name of my custodian bank, broker, dealer or other nominee?*

A: If you hold our common stock through a custodian bank, broker, dealer or other nominee, we will ask your custodian bank, broker, dealer or other nominee to notify you of the rights offering. If you wish to exercise your rights, you will need to have your custodian bank, broker, dealer or other nominee act for you. To indicate your decision, you should complete and return to your custodian bank, broker, dealer or other nominee the form entitled “Beneficial Owner Election Form” substantially in the form accompanying this prospectus. You should receive this form from your custodian bank, broker, dealer or other nominee with the other rights offering materials. You should contact your custodian bank, broker, dealer or other nominee if you believe you are entitled to participate in the rights offering but you have not received this form.

Q: *What should I do if I want to participate in the rights offering, but I am a stockholder with a foreign address or a stockholder with an Army Post Office or Fleet Post Office address?*

A: The subscription agent will not mail rights certificates to you if you are a stockholder whose address is outside the United States or if you have an Army Post Office or a Fleet Post Office address. To exercise your rights, you must notify the subscription agent prior to 11:00 a.m., Eastern Time, at least three (3) business days prior to the Expiration Date, and establish to the satisfaction of the subscription agent that it is permitted to exercise your subscription rights under applicable law. If you do not follow these procedures by such time, your rights will expire and will have no value.

Q: *Will I be charged a sales commission or a fee if I exercise my subscription rights?*

A: We will not charge a brokerage commission or a fee to rights holders for exercising their subscription rights. However, if you exercise your subscription rights through a custodian bank, broker, dealer or nominee, you will be responsible for any fees charged by your custodian bank, broker, dealer or nominee.

Q: *Are there any conditions to my right to exercise my subscription rights?*

A: Yes. We may terminate the rights offering, in whole or in part, if at any time before completion of the rights offering there is any judgment, order, decree, injunction, statute, law or regulation entered, enacted, amended or held to be applicable to the rights offering that in the sole judgment of our board of directors would or might make the rights offering or its completion, whether in whole or in part, illegal or otherwise restrict or prohibit completion of the rights offering. See “The Rights Offering — Conditions to the Rights Offering” beginning on page [37](#).

Q: *Has the board of directors made a recommendation regarding the rights offering?*

A: Neither the Company, nor our board of directors is making any recommendation as to whether or not you should exercise your subscription rights. You are urged to make your decision based on your own assessment of the rights offering, after considering all of the information herein, including the “Risk Factors” beginning on page [20](#) of this prospectus, and of your best interests.

Q: *Have any directors, officers, and/or stockholders agreed to exercise their rights?*

A: All holders of our common stock as of the record date for the rights offering will receive, at no charge, the non-transferable subscription rights to purchase Units as described in this prospectus. To the extent that our directors and officers held shares of our common stock (including shares of restricted common stock) as of the record date, they will receive the subscription rights and, while they are under no obligation to do so, will be entitled to participate in the rights offering.

Robert W. Duggan, the beneficial owner of approximately 43% of our outstanding common stock prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so. If other stockholders do not exercise their subscription rights and Mr. Duggan exercises all of his subscription rights, Mr. Duggan would be the only stockholder to subscribe for Units in connection with this rights offering, which would result in Mr. Duggan becoming the beneficial owner of approximately [***] % of our common stock (assuming no exercise of the warrants to purchase shares of common stock issued in this offering). See the section titled

“Prospectus Summary” above for information on how this percentage is calculated. If Mr. Duggan acquires a majority of our common stock, we would be considered a “controlled” company under the Nasdaq Stock Market rules and would be exempt from the obligation to comply with certain Nasdaq Stock Market corporate governance requirements.

Q: *May stockholders in all states participate in the rights offering?*

A: Although we intend to distribute the rights to all stockholders, we reserve the right in some states to require stockholders, if they wish to participate, to state and agree upon exercise of their respective rights that they are acquiring the securities for investment purposes only, and that they have no present intention to resell or transfer any securities acquired. Our securities are not being offered in any jurisdiction where the offer is not permitted under applicable local laws.

Q: *Are there risks in exercising my subscription rights?*

A: The exercise of your subscription rights involves significant risks. Exercising your rights means buying our Units, which consist of additional shares of our common stock and warrants exercisable in cash for additional shares of our common stock, and should be considered as carefully as you would consider any other equity investment. Among other things, you should carefully consider the risks described under the heading “Risk Factors,” beginning on page [20](#).

Q: *How many shares of our common stock will be outstanding after the rights offering?*

A: The number of shares of our common stock that will be outstanding after the rights offering will depend on the number of Units that are purchased in the rights offering. Assuming no additional shares of common stock are issued by us prior to consummation of the rights offering and assuming all offered Units are sold in the rights offering at the Initial Price, we will issue approximately [\bullet] shares of common stock. In that case, we will have approximately [\bullet] shares of common stock outstanding after the rights offering. This would represent an increase of approximately [\bullet] % in the number of outstanding shares of common stock. We would also issue warrants to purchase approximately an additional [\bullet] shares of our common stock. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units, each consisting of one share of common stock and 0.15 warrants to purchase shares of our common stock in the rights offering and the number of shares of common stock and warrants to purchase common stock outstanding after the rights offering will accordingly be higher.

The issuance of shares of our common stock and warrants in the rights offering will dilute, and thereby reduce, your proportionate ownership in our shares of common stock, unless you fully exercise your basic subscription rights. In addition, the issuance of our Units at a subscription price that is less than the market price as of the record date for the rights offering will likely reduce the price per share of our common stock held by you prior to the rights offering.

Q: *What will be the proceeds of the rights offering?*

A: If all rights are exercised, we will receive gross proceeds of approximately \$30 million before expenses (excluding the proceeds from any warrants which may be exercised following the completion of the rights offering), as provided herein. We are offering Units in the rights offering with no minimum purchase requirement. As a result, there is no assurance we will be able to sell all or any of the Units being offered, and it is not likely that all of our stockholders will participate in the rights offering.

Furthermore, if all of the rights are exercised, the warrants issued in this rights offering would be exercisable for an aggregate of \$4.5 million. However, no assurance can be given that any warrants will be exercised.

Q: *After I exercise my rights, can I change my mind and cancel my purchase?*

A: No. Once you exercise and send in your subscription rights certificate and subscription payment, as provided herein, you cannot revoke the exercise of your subscription rights, even if you later learn information about Pulse Biosciences that you consider to be unfavorable. You should not exercise your subscription rights unless you are certain that you wish to purchase Units at the Initial Price. See “The Rights Offering — No Revocation or Change” beginning on page [41](#).

Q: *What are the material U.S. Federal income tax consequences of exercising my subscription rights?*

A: Although the authorities governing transactions such as this rights offering are complex and unclear in certain respects, we believe and intend to take the position that the distribution of subscription rights to a holder with respect to such holder's shares of common stock should generally be treated, for U.S. federal income tax purposes, as a non-taxable distribution. For a detailed discussion, see "Material U.S. Federal Income Tax Consequences" beginning on page [44](#). You should consult your tax advisor as to the particular consequences to you of the rights offering.

Q: *If the rights offering is not completed, for any reason, will my subscription payment be refunded to me?*

A: Yes. The subscription agent will hold all funds it receives in a segregated bank account until the rights offering is completed. If the rights offering is not completed, for any reason, any money received from subscribing stockholders will be refunded in the form which paid as soon as practicable, without interest or deduction. If your shares are held in the name of a custodian bank, broker, dealer or other nominee, it may take longer for you to receive the refund of your subscription payment than if you were a record holder of your shares because the subscription agent will return payments through the record holder of your shares.

Q: *Will I receive interest on any funds I deposit with the subscription agent?*

A: No. You will not be entitled to any interest on any funds that are deposited with the subscription agent pending completion or cancellation of the rights offering. If the rights offering is cancelled for any reason, the subscription agent will return this money to subscribers, without interest or penalty, as soon as practicable.

Q: *If I exercise my subscription rights, when will I receive my shares of common stock and warrants that I purchased in the rights offering?*

A: We will issue the shares of common stock and warrants included in the Units purchased in the rights offering to you in book-entry, or uncertificated, form of our common stock purchased in the rights offering as soon as practicable after the expiration of the rights offering and after all pro rata allocations and adjustments have been completed. We will not be able to calculate the number of shares and warrants to be issued to each exercising holder until after the Expiration Date of the rights offering.

Q: *When can I sell the shares of common stock and warrants I receive in the rights offering?*

A: If you exercise your subscription rights and receive common stock included in the Units purchased in the rights offering, you will be able to resell the shares of common stock once your account has been credited with those shares, provided you are not otherwise restricted from selling the shares (for example, because you are an insider or affiliate of the Company or because you possess material nonpublic information about the Company). Although we will endeavor to issue the shares and warrants as soon as practicable after completion of the rights offering, there may be a delay between the Expiration Date of the rights offering and the time that the shares and warrants are issued due to factors such as the time required to complete all necessary calculations. In addition, we cannot assure you that, following the exercise of your subscription rights, you will be able to sell the shares purchased in the rights offering at a price equal to or greater than the subscription price. The warrants issued in the rights offering will not be listed on any securities exchange or other trading market. We cannot assure you that you will be able to sell or otherwise transfer the warrants.

Q: *To whom should I send my forms and payment?*

A: If your shares are held in the name of a custodian bank, broker, dealer or other nominee, the nominee will notify you of the rights offering and provide you with the rights offering materials, including a form entitled "Beneficial Owners Election Form." You should send the Beneficial Owner Election form and payment, as provided therein, to the nominee, at the deadline that your nominee sets which may be earlier than the expiration of the rights offering. You should contact your custodian bank, broker, dealer or other nominee if you believe you are entitled to participate in the rights offering but you have not received this form.

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If your shares are held in your name such that you are the record holder, then you should send your subscription documents, rights certificate and subscription payment, as provided herein, by first class mail or courier service to Broadridge Corporate Issuer Solutions, Inc., the subscription agent. The address for delivery to the subscription agent is as follows:

By Mail:

*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718*

By Overnight Delivery:

*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS IWS
51 Mercedes Way
Edgewood, NY 11717*

Your delivery to a different address or other than by the methods set forth above will not constitute valid delivery. You, or, if applicable, your nominee, are solely responsible for ensuring the subscription agent receives your subscription documents, rights certificate, and subscription payment. You should allow sufficient time for delivery of your subscription materials to the subscription agent and clearance of payment before the expiration of the rights offering period.

Q: Will this rights offering result in the Company “going private” for purposes of Rule 13e-3 of the Exchange Act?

A: No. The rights offering is not a transaction or series of transactions which has either a reasonable likelihood or a purpose or producing a “going private effect” as specified in Rule 13e-3 of the Exchange Act. Given the structure of the rights offering, as described in this prospectus, Pulse Biosciences will continue to be registered pursuant to Section 12 of the Exchange Act and intends to remain listed on the Nasdaq Capital Market following completion of the rights offering.

Q: What if I have other questions?

A: If you have other questions about the rights offering, please contact our information agent, Broadridge Corporate Issuer Solutions, Inc., toll free at 1-888-789-8409, by e-mail at shareholder@broadridge.com, or by mail at:

*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718*

RISK FACTORS

Investing in our Units, common stock, and warrants involves a high degree of risk. Before deciding to invest in our securities, please read carefully the risks and uncertainties described below and incorporated by reference in this prospectus. These risks and uncertainties include those discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, which is incorporated by reference and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. See “Incorporation by Reference” and “Where You Can Find Additional Information.” The risks described below are not the only risks facing us. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially affect our business, financial condition, results of operations and prospects. In addition, the impact of COVID-19 and any worsening of the economic environment may exacerbate the risks described below, any of which could have a material impact on us. This situation is changing rapidly and additional impacts may arise that we are not aware of currently. If any of the risks or uncertainties described in this prospectus or our SEC filings or any such additional risks and uncertainties actually occur, our business, financial condition or results of operations could be materially and adversely affected, which could cause our actual operating results to differ materially from those indicated or suggested by forward-looking statements made in this prospectus or our SEC filings or presented elsewhere by management from time to time. In that case, the trading price of our common stock could decline and you could lose all or part of your investment. Please also see “Cautionary Note Regarding Forward-Looking Statements” beginning on page [2](#).

Risks Related to Our Business

There is substantial doubt about our ability to continue as a going concern.

To date, we have not generated any revenue and have incurred significant operating losses in each year since our inception, and we expect to continue to incur additional losses for the next several years. In connection with our Annual Report on Form 10-K for the year ended December 31, 2019, management concluded that there is substantial doubt we can continue as an ongoing business for the next twelve months from the date that our audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2019 were issued unless we obtain additional capital. As a result, our independent registered public accountants included an explanatory paragraph in their auditors’ reports relating to going concern.

We plan to raise additional capital to fund our operations, including via this proposed rights offering seeking to raise net proceeds of approximately \$29.5 million, assuming the rights offering is fully subscribed and excluding the proceeds from any warrants which may be issued in the rights offering and exercised following the completion of the offering. There is no assurance that the rights offering will be successful, or that additional financing will be available when needed or that management will be able to obtain financing on terms acceptable to us. Accordingly, management cannot conclude that such plans will be effectively implemented within the twelve months from the date that our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019 were issued.

These factors, combined with our forecast of cash required to fund operations for a period of at least twelve months from the date that our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019 were issued, raise substantial doubt about our ability to continue as a going concern.

If we are unable to obtain sufficient funding, we may be unable to execute our business plan and fund operations. We may not be able to obtain additional financing on commercially reasonable terms, or at all.

We have experienced operating losses, and we expect to continue to incur operating losses for the next several years as we implement our business plan. Currently, we have no revenue and do not have arrangements in place for all the anticipated financing that would be required to fully implement our business plan. Our prior losses combined with expected future losses, have had and will continue to have, for the foreseeable future, an adverse effect on our stockholders’ equity and working capital.

We will need to raise additional capital in order to continue to execute our business plan in the future including by pursuing this rights offering to raise net proceeds of approximately \$29.5 million, assuming such rights offering is fully subscribed and excluding the proceeds from any warrants which may be issued in the rights offering and exercised following the completion of the rights offering. There is no assurance that this rights offering will be

successful, or that additional financing will be available when needed or that management will be able to obtain financing on terms acceptable to us. If we are unable to raise sufficient additional funds, we will have to scale back our operations. The ongoing COVID-19 pandemic and resulting negative impact on the global macroeconomic environment and capital markets may make it more difficult for us to raise additional funds.

We cannot give any assurance that we will be able to obtain all the necessary funding that we may need. In addition, we believe that we will require additional capital in the future to fully develop our technologies and planned products to the stage of a commercial launch. We have pursued and may pursue additional funding through various financing sources, including the private sale of our equity and debt securities, licensing fees for our technology, joint ventures with capital partners and project type financing. If we raise funds by issuing equity or equity-linked securities, dilution to certain of our stockholders will result. Any equity securities issued may also provide for rights, preferences or privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings could impose significant restrictions on our operations. We also may seek government-based financing, such as development and research grants. There can be no assurance that funds will be available on commercially reasonable terms, if at all.

The incurrence of indebtedness or the issuance of certain equity securities could result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on our ability to incur additional debt or issue additional equity, limitations on our ability to acquire or license intellectual property rights, and other operating restrictions that could adversely affect our ability to conduct our business. In addition, the issuance of additional equity securities by us, or the possibility of such issuance, may cause the market price of our common stock to decline. In the event that we enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms. These agreements may require that we relinquish, or license to a third party on unfavorable terms, our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves, or reserve certain opportunities for future potential arrangements when we might otherwise be able to achieve more favorable terms. In addition, we may be forced to work with a partner on one or more of our products or market development programs, which could lower the economic value of those programs to us.

If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, we may terminate or delay the development of one or more of our products, delay clinical trials necessary to market our products, or delay establishment of sales and marketing capabilities or other activities necessary to commercialize our products. If this were to occur, our ability to grow and support our business and to respond to market challenges could be significantly limited or we may be unable to continue operations, in which case our investors could lose their entire investment.

Risks Related to the Rights Offering

The subscription price determined for this rights offering is not an indication of our value.

In determining the subscription price for the rights offering, our board of directors, with the advice and input of management and advisors, considered a number of factors, including: the likely cost of capital from other sources and the general conditions of the securities markets, the price at which our stockholders might be willing to participate in the rights offering, historical and current trading prices for our common stock, our need for liquidity and capital, the value of the warrants being issued as a component of the Unit and the desire to provide an opportunity to our stockholders to participate in the rights offering on a pro rata basis. In conjunction with its review of these factors, our board of directors also reviewed a range of subscription prices in various prior rights offerings of public companies. The subscription price is not necessarily related to our book value, net worth or any other established criteria of value and may or may not be considered the fair value of the Units to be offered in the rights offering. The market price of our common stock may decline during or after the rights offering, including below the subscription price for the Units. After the date of this prospectus, our common stock may trade at prices above or below the subscription price.

The market price of our common stock may decline.

We cannot assure you that the market price of our common stock will not either increase or decline before the subscription rights expire. Depending upon the trading price of our common stock at the time of our announcement of the rights offering, the announcement of the rights offering and its terms, including the subscription price, together with the number of shares of common stock and warrants we could issue if the Rights Offering is completed, may result in a decrease in the trading price of our common stock. This decline may continue after the completion of rights

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offering. Further, if a substantial number of rights are exercised and the holders of the shares received in the rights offering or upon exercise of the warrants received in the rights offering choose to sell some or all of the shares of common stock, the resulting sales could depress the market price of our common stock.

There is no guarantee that by the time the shares and warrants are delivered to you, the market price of our common stock will be above the subscription price for the Units or exercise price for the warrants. Further, because the exercise of your rights is not revocable and because the rights are not transferrable, you will not be able to revoke your subscription if the market price decreases prior to the delivery of the shares and warrants or transfer of the shares and warrants until after they are delivered.

There is no guarantee that the subscription price, whether it is set at the Initial Price or the Alternate Price, will be lower than the market price of our common stock at the time that the shares and warrants that you receive in the rights offering are delivered. Further, because the exercise of your rights is not revocable and because the rights are not transferable, you will not be able to revoke your subscription if the market price decreases prior to the delivery of the shares and warrants or transfer of the shares until after they are delivered to you. Accordingly, the subscription price at which you are purchasing Units, which include shares of common stock and warrants, may be above the prevailing market price by the time that the shares of common stock are purchased and delivered.

If you exercise your subscription rights and the market price of the common stock falls below the subscription price, then you will have committed to buy Units in the rights offering, which include shares of common stock and warrants, at a price that is higher than the market price. Moreover, we cannot assure you that you will ever be able to sell shares of common stock that you received in the rights offering or that result from the exercise of warrants you received in the rights offering at a price equal to or greater than the subscription price or exercise price. Until shares are issued to you in book-entry, or uncertificated, form upon expiration of the rights offering, you may not be able to sell the shares of our common stock that you receive in the rights offering. We will issue shares of our common stock that you received in the rights offering in book-entry, or uncertificated, form as soon as practicable after expiration of the rights offering. We will not pay you interest on funds delivered to the subscription agent pursuant to the exercise of rights.

If you do not exercise your subscription rights in full, your percentage ownership and voting rights in Pulse Biosciences will experience dilution.

If you choose not to exercise your subscription rights, you will retain your current number of shares of our common stock. If other stockholders fully exercise their subscription rights or exercise a greater proportion of their subscription rights than you exercise, the percentage of our common stock owned by these other stockholders will increase relative to your ownership percentage, and your voting and other rights in the Company will likewise be diluted. Further, the shares issuable upon the exercise of the warrants to be issued pursuant to the rights offering will dilute the ownership interest of stockholders not participating in this rights offering or holders of warrants who have not exercised them.

The subscription rights and Units are non-transferable and thus there will be no market for them.

You may not sell, transfer or assign your subscription rights or Units to anyone else, unless as required by operation of law. We do not intend to list the subscription rights on any securities exchange or any other trading market. Because the subscription rights are non-transferable, there is no market or other means for you to directly realize any value associated with the subscription rights.

There is no public market for the warrants included in the units.

There is no public trading market for our warrants, and we do not expect a market to develop. We do not intend to list the warrants on any securities exchange or other trading market. Without an active market, we cannot assure you that you will be able to sell or otherwise transfer the warrants as the liquidity of the warrants will be limited and you may not realize any value from the warrants by attempting to sell or otherwise transfer them for consideration.

If you purchase fewer than seven Units at the Initial Price, you will not receive any warrants.

You will only be entitled to such number of warrants calculated by rounding down to the nearest whole number the product computed by multiplying the number of Units to which you exercise your subscription rights by a factor of 0.15. Accordingly, if you purchase fewer than seven Units at the Initial Price, you will not receive any warrants.

The market price of our common stock may never exceed the exercise price of the warrants.

The warrants being issued in connection with this rights offering become exercisable upon issuance and will expire five years after issuance. We cannot provide you any assurance that the market price of our common stock will ever exceed the exercise price of the warrants (which shall be equal to the subscription price in this rights offering) prior to their date of expiration. Any warrants not exercised by their date of expiration will expire for no value and we will be under no further obligation to the warrant holder.

In certain circumstances, we may call the warrants for redemption.

We may call the warrants for redemption, in whole and not in part, at a price of \$0.01 per warrant at any time following the six-month anniversary of issuance, upon not less than 30 days' prior written notice of redemption to each warrant holder, provided that the volume weighted average price of our common stock equals or exceeds 200% of the exercise price for the warrants (which shall be equal to the subscription price for Units in this rights offering), subject to adjustment, per share, for 10 consecutive trading days. The warrants will be adjusted to reflect any stock split, stock dividend or similar recapitalization with respect to the common stock. If we give notice of redemption, you will be forced to sell or exercise your Warrants or accept the redemption price. Furthermore, the exercise price must be paid in cash at the time of exercise and there is no "cashless" exercise provision for the warrants. The notice of redemption could come at a time when it is not advisable or possible for you to exercise the warrants. As a result, you would be unable to benefit from owning the warrants being redeemed. A notice of redemption may also result in our common stock becoming more volatile and being subject to greater selling pressure which could result in declines in the market price for our common stock.

You may not be able to resell any shares of our common stock that you receive pursuant to the exercise of subscription rights immediately upon expiration of the subscription rights offering period or be able to sell your shares at a price equal to or greater than the subscription price.

If you exercise subscription rights, you may not be able to resell the common stock that you receive in the rights offering until you, or your custodian bank, broker, dealer or other nominee, if applicable, have received those shares. Moreover, you will have no rights as a stockholder of the shares you received in the rights offering until we issue the shares to you. Although we will endeavor to issue the shares as soon as practicable after completion of the rights offering, and after all necessary calculations have been completed, there may be a delay between the Expiration Date of the rights offering and the time that the shares are issued. In addition, we cannot assure you that, following the exercise of your subscription rights, you will be able to sell your common stock at a price equal to or greater than the subscription price.

Because no minimum subscription is required and because we do not have formal commitments from our stockholders for the entire amount we seek to raise pursuant to the rights offering, we cannot assure you of the amount of proceeds that we will receive from the rights offering.

No minimum subscription is required for consummation of the rights offering. Although Robert W. Duggan, the beneficial owner of approximately 43% of our outstanding common stock prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, he has not made any formal binding commitment to do so, and we do not have formal commitments from our stockholders for the amount we seek to raise pursuant to the rights offering, and it is possible that no additional rights will be exercised in connection with the rights offering. As a result, we cannot assure you of the amount of proceeds that we will receive in the rights offering. Therefore, if you exercise all or any portion of your subscription rights, but other stockholders do not, we may not raise the desired amount of capital in the rights offering, the market price of our common stock could be adversely impacted and we may find it necessary to pursue alternative means of financing, which may be dilutive to your investment.

Because we may terminate the rights offering at any time prior to the Expiration Date, your participation in the rights offering is not assured.

We do not intend, but have the right, to terminate the rights offering at any time prior to the Expiration Date. If we determine to terminate the rights offering, we will not have any obligation with respect to the subscription rights except to return any money received from subscribing stockholders as soon as practicable, without interest or deduction.

You will need to act promptly and to carefully follow the subscription instructions, or your exercise of rights may be rejected.

Stockholders who desire to purchase Units in the rights offering must act promptly to ensure that all required forms and payments are actually received by the subscription agent prior to the Expiration Date, which is currently set to be 5:00 p.m. on June 8, 2020. If you are a beneficial owner of shares, you must act promptly to ensure that your custodian bank, broker, dealer or other nominee acts for you and that all required forms and payments are actually received by the subscription agent prior to the Expiration Date. Your nominee may establish a deadline prior to the Expiration Date by which you must provide it with your instructions to exercise your subscription rights and payment for your Units. We will not be responsible if your custodian bank, broker, dealer or nominee fails to ensure that all required forms and payments are actually received by the subscription agent prior to the Expiration Date. If you fail to complete and sign the required subscription forms, send an incorrect payment amount, or otherwise fail to follow the subscription procedures that apply to your desired transaction the subscription agent may, depending on the circumstances, reject your subscription or accept it to the extent of the payment received. Neither we nor our subscription agent will undertake to contact you concerning, or attempt to correct, an incomplete or incorrect subscription form or payment. We have the sole discretion to determine whether a subscription exercise properly follows the subscription procedures.

By participating in the rights offering and executing a rights certificate, you are making binding and enforceable representations to the Company.

By signing the rights certificate and exercising their rights, each stockholder agrees, solely with respect to such stockholder's exercise of rights in the rights offering, that we have the right to void and cancel (and treat as if never exercised) any exercise of rights, and securities issued pursuant to an exercise of rights, if any of the agreements, representations or warranties of a subscriber in the subscription documents are false.

If you make payment of the subscription price by uncertified personal check, your check may not clear in sufficient time to enable you to purchase Units in the rights offering.

Any uncertified personal check used to pay the subscription price in the rights offering must clear prior to the Expiration Date of the rights offering, and the clearing process may require at least five (5) business days. As a result, if you choose to use an uncertified personal check to pay the subscription price, it may not clear prior to the Expiration Date, in which event you would not be eligible to exercise your subscription rights. You may eliminate this risk by paying the subscription price by a certified check, bank draft, cashier's check, U.S. postal money order, or wire transfer of funds to ensure that the subscription agent receives your funds prior to the expiration of the rights offering.

If you exercise the over-subscription right, you may not receive all of the Units for which you subscribe.

Exercise of the over-subscription right will only be honored if and to the extent that the basic subscription rights have not been exercised in full. If sufficient Units are available, we will seek to honor your over-subscription request in full. If, however, over-subscription requests exceed the number of Units available to be purchased pursuant to the over-subscription right, we will allocate the available Units proportionately among stockholders who exercised their over-subscription rights based on the number of Units each stockholder subscribed for under such stockholder's basic subscription rights. As a result, you may not receive any or all of the Units for which you exercise your over-subscription right.

As soon as practicable after the Expiration Date, the subscription agent will determine the number of Units that you may purchase pursuant to the over-subscription right. If you have properly exercised your over-subscription right, we will issue the shares of common stock and warrants included in the Units purchased in the rights offering to you in book-entry, or uncertificated, form as soon as practicable after the Expiration Date and after all allocations and adjustments have been effected. If you request and pay for more Units than are allocated to you, we will refund the overpayment, without interest or deduction. In connection with the exercise of the over-subscription right, custodian banks, brokers, dealers and other nominee holders of subscription rights who act on behalf of beneficial owners will be required to certify to us and to the subscription agent as to the aggregate number of subscription rights exercised, and the number of Units requested through the over-subscription right, by each beneficial owner on whose behalf the nominee holder is acting.

The tax treatment of the rights offering may be treated as a taxable event to you.

We believe and intend to take the position that the distribution of the subscription rights in connection with the rights offering generally should not be a taxable event to holders of our common stock for U.S. federal income tax purposes. If the rights offering is deemed to be part of a “disproportionate distribution” under Section 305 of the Internal Revenue Code of 1986, as amended (the “Code”), holders of our common stock may recognize taxable income for U.S. federal income tax purposes in connection with the receipt of subscription rights in the rights offering. Holders of our common stock are urged to consult their tax advisors with respect to the tax consequences of the rights offering. Please see the section titled “Material U.S. Federal Income Tax Consequences” beginning on page [44](#) for further information.

We have broad discretion in the use of proceeds of the rights offering. Because our management will have broad discretion over the use of the net proceeds from the rights offering, you may not agree with how we use the proceeds, and we may not invest the proceeds successfully.

We currently intend to use the net proceeds from this offering, if any, for general working capital purposes, including the ongoing investment in current and future clinical and pre-clinical studies evaluating the safety and efficacy of Pulse Biosciences’ proprietary NPS technology, the development and enhancement of Pulse Biosciences’ CellFX System, obtaining regulatory clearance for our CellFX System, sales and marketing activities and general corporate operations. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. Our board of directors and management will have considerable discretion in the application of the net proceeds from the rights offering, and it is possible that we may allocate the proceeds differently than investors in the rights offering may desire or that we may fail to maximize the return on these proceeds. Accordingly, you will be relying on the judgment of our management with regard to the use of the proceeds from the rights offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for the Company.

Risks Related to Owning Our Common Stock

The price of our common stock has been, and we expect it to continue to be, highly volatile, and you may be unable to sell your shares at or above the subscription price for the Units.

The market price of our common stock has been highly volatile, and we expect it to continue to be highly volatile for the foreseeable future in response to many risk factors listed in this prospectus and in our Annual Report on Form 10-K, and others beyond our control, including:

- results of clinical trials of our planned products or those of our competitors;
- actions by regulatory bodies, such as the FDA, that affect our business or have the effect of delaying or rejecting approval or clearance of our planned products such as the CellFX System;
- actual or anticipated fluctuations in our financial condition and operating results;
- announcements by our customers, partners or suppliers relating directly or indirectly to our products, services or technologies;
- announcements of technological innovations by us or our competitors;
- changes in laws or regulations applicable to our planned products;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, capital commitments or achievement of significant milestones;
- additions or departures of key personnel;
- competition from existing products or new products that may emerge;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters or our ability to obtain intellectual property protection for our technologies;

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- actual or alleged security breaches;
- announcements or expectations of additional financing efforts;
- sales of our common stock by us or our stockholders;
- stock price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- reports, guidance and ratings issued by securities or industry analysts;
- overall conditions in our industry and market, including the negative impact of COVID-19 on the global economy and markets; and
- general economic and market conditions.

If any of the foregoing occurs, it may cause our stock price or trading volume to decline. Stock markets in general, and the market for companies in our industry in particular have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. Investors may not realize any return on their investment in us and may lose some or all of their investment. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns and adversely impact our ability to raise capital to fund operations, which could seriously harm our business.

Sales or purchases of shares of our common stock may adversely affect the market for our common stock.

If we or our stockholders, particularly our directors, executive officers and significant stockholders, sell or purchase, register for sale, or indicate an intent to sell or purchase, shares of our common stock in the public market, it may have a material adverse effect on the market price of our common stock. In particular, Robert W. Duggan is not subject to any contractual restrictions with us on his ability to sell or transfer our common stock, and these sales or transfers could create substantial declines in the price of our securities or, if these sales or transfers were made to a single buyer or group of buyers, could contribute to a transfer of control of our company to a third party. Sales by Robert W. Duggan of a substantial number of shares, or the expectation of such sales, could cause a significant reduction in the market price of our common stock.

We maintain a shelf registration statement on Form S-3 pursuant to which we may, from time to time, sell up to an aggregate of \$150.0 million of our common stock, preferred stock, depositary shares, warrants, debt securities or units. We may also issue shares of common stock or securities convertible into exchangeable, or exercisable for our common stock from time to time in connection with financings, acquisitions, investments or otherwise. Any such issuances would result in dilution to certain of our existing stockholders and could cause our stock price to fall. We may also sell shares or other securities at a price per share that is less than the price per share paid by existing investors, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders.

We do not know whether an active, liquid and orderly trading market will be maintained for our common stock and as a result it may be difficult for you to sell your common stock.

Prior to our initial public offering in May 2016, there was no public market for our common stock. Although our common stock is listed on the Nasdaq Capital Market, the market for our shares has demonstrated varying levels of trading activity. As a result of these and other factors, you may not be able to sell your common stock quickly or at or above the price paid to acquire the stock or at all. Further, an inactive market may also harm our ability to raise capital by selling additional common stock and may harm our ability to enter into strategic collaborations or acquire companies or products by using our common stock as consideration.

Concentration of ownership by our principal stockholder may limit your ability to influence the outcome of director elections and other transactions requiring stockholder approval.

A significant percentage of our outstanding stock is held by Mr. Duggan, who beneficially owns approximately 43% of our common stock outstanding as of the date of this prospectus. As a result, Mr. Duggan has significant influence over corporate actions requiring stockholder approval, including the following actions:

- to elect or defeat the election of our directors;
- to amend or prevent amendment of our certificate of incorporation or bylaws;
- to effect or prevent a merger, sale of assets or other corporate transaction; and
- to control the outcome of any other matter submitted to our stockholders for vote.

Mr. Duggan has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so. If other stockholders do not exercise their subscription rights and Mr. Duggan exercises all of his subscription rights, Mr. Duggan would be the only stockholder to subscribe for Units in connection with this rights offering, which would result in Mr. Duggan becoming the beneficial owner of approximately [•]% of our common stock (assuming no exercise of the warrants to purchase shares of common stock acquired in this offering). See the section titled “Prospectus Summary” above for information on how this percentage is calculated. If Mr. Duggan acquires a majority of our common stock, we would be considered a “controlled” company under the Nasdaq Stock Market rules and would be exempt from the obligation to comply with certain Nasdaq Stock Market corporate governance requirements.

Mr. Duggan’s stock ownership may discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company, which in turn could reduce our stock price or prevent our stockholders from realizing a premium over our stock price. In addition, Mr. Duggan is not subject to any contractual restrictions on his ability to acquire additional shares of common stock and any such purchases, including purchases of equity securities in connection with this proposed rights offering or any alternative equity or equity-linked offering that we may conduct, could result in his acquisition of a majority of our common stock. If this were to occur, we would be considered a “controlled” company under the Nasdaq rules and would be exempt from the obligation to comply with certain Nasdaq corporate governance requirements.

Management currently beneficially holds a small percentage of our common stock. Other than their positions as directors or officers, and the restriction on the stockholders being able to call a special meeting limited to holders of 15% or more of the outstanding shares of common stock, our management will not be able to greatly influence corporate actions requiring stockholder approval.

Robert W. Duggan’s significant ownership position may impact our stock price and may deter or prevent efforts by other companies to acquire us, which could prevent our stockholders from realizing a control premium.

Mr. Duggan, the beneficial owner of approximately 43% of our outstanding common stock prior to this rights offering, has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so. If other stockholders do not exercise their subscription rights and Mr. Duggan exercises all of his subscription rights, Mr. Duggan would be the only stockholder to subscribe for Units in connection with this rights offering, which would result in Mr. Duggan becoming the beneficial owner of approximately [•]% of our common stock (assuming no exercise of the warrants to purchase shares of common stock acquired in this offering). See “Concentration of ownership by our principal stockholder may limit your ability to influence the outcome of director elections and other transactions requiring stockholder approval” above. In addition, Mr. Duggan is not subject to any contractual restrictions on his ability to acquire additional shares of common stock, and any such purchases, including purchases in connection with this rights offering or any alternative equity or equity-linked offering that we may conduct, could result in his acquisition of a majority of our common stock. If Mr. Duggan acquires a majority of our common stock, we would be considered a “controlled” company under the Nasdaq Stock Market rules and would be exempt from the obligation to comply with certain Nasdaq Stock Market corporate governance requirements. As a result of Mr. Duggan’s significant ownership and position as Chairman of our board of directors, other companies may be less inclined to pursue an acquisition of us and therefore

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we may not have the opportunity to be acquired in a transaction that stockholders might otherwise deem favorable, including transactions in which our stockholders might realize a substantial premium for their shares. In addition, public speculation regarding Mr. Duggan, as well as our relationship with Mr. Duggan, could cause our stock price to fluctuate.

We have incurred and will continue to incur costs as a result of operating as a public company and our management has been and will be required to devote substantial time to public company compliance initiatives.

As a public company, listed in the United States, we have incurred and will continue to incur significant legal, accounting and other expenses due to our compliance with regulations and disclosure obligations applicable to us, including compliance with the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as well as rules implemented by the SEC and the Nasdaq Stock Market. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require our compliance.

Stockholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact, in ways we cannot currently anticipate, the manner in which we operate our business. Our management and other personnel have and will continue to devote a substantial amount of time to these compliance programs and monitoring of public company reporting obligations and, as a result of the new corporate governance and executive compensation related rules, regulations, and guidelines prompted by the Dodd-Frank Wall Street Reform and Protection Act, or the Dodd-Frank Act, and further regulations and disclosure obligations expected in the future, we will likely need to devote additional time and costs to comply with such compliance programs and rules. New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act, and rules adopted by the SEC and the Nasdaq Stock Market, will likely result in increased costs to us as we respond to their requirements. We are currently evaluating and monitoring developments with respect to these rules and regulations, and we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

Furthermore, these and future rules and regulations could make it more difficult or more costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as our executive officers.

We are an “emerging growth company” under the JOBS Act as well as a “smaller reporting company,” as a result, we cannot be certain if the applicable reduced disclosure requirements will make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act, and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We also qualify as a “smaller reporting company,” as defined in the Exchange Act, and so long as we remain a smaller reporting company, we benefit from and may take advantage of scaled disclosure requirements.

We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our reporting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected. We will remain an “emerging growth company” for up to five years from our IPO in 2016, although we will lose that status sooner if our revenues exceed \$1.07 billion, if we issue more than \$1.0 billion in non-convertible debt in a three-year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of June 30.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our market price and trading volume could decline.

The trading market for our common stock will depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. We currently have only limited analyst coverage of us and there can be no assurance that analysts will continue to cover us or provide favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our market price would likely decline. If analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We have not paid dividends in the past and have no plans to pay dividends.

We plan to reinvest all of our earnings, to the extent we have earnings, into our product research and development. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our outstanding common stock.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Certain anti-takeover provisions of Delaware law and provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. These provisions could also make it difficult for stockholders to elect directors that are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. Our certificate of incorporation and bylaws include provisions that:

- authorize our board of directors to issue, without further action by the stockholders, up to 50,000,000 shares of preferred stock and up to approximately 500,000,000 shares of authorized but unissued shares of common stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our board of directors, the chairman of our board of directors, any of our officers, or any stockholder holding at least fifteen percent (15%) of the voting power of the capital stock issued and outstanding and entitled to vote;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all the then outstanding shares of our voting stock, voting together as a single class, to amend provisions of our certificate of incorporation or our bylaws;
- the ability of our board of directors by majority vote, to amend the bylaws; and
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to engage in certain types of transactions with us.

USE OF PROCEEDS

Although we cannot determine what the actual net proceeds from the sale of the Units in the rights offering will be until the rights offering is completed, assuming all subscription rights are exercised, we estimate that the aggregate net proceeds from the sale of the Units, after deducting estimated offering expenses, will be approximately \$29.5 million. Furthermore, if all of the rights are exercised, the warrants issued in this rights offering would be exercisable, in cash, for an aggregate of \$4.5 million. However, no assurance can be given that any warrants will be exercised. We currently intend to use the net proceeds from this offering, if any, for general working capital purposes, including the ongoing investment in current and future clinical and pre-clinical studies evaluating the safety and efficacy of Pulse Biosciences' proprietary NPS technology, the development and enhancement of Pulse Biosciences' CellFX System, obtaining regulatory clearance for our CellFX System, sales and marketing activities and general corporate operations. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. As a result, our management will have broad discretion regarding the timing and application of the net proceeds from this offering. Pending the uses described above, we intend to invest the net proceeds in interest-bearing, investment-grade securities.

DESCRIPTION OF CAPITAL STOCK

The following description of the capital stock of the Company is a summary of the rights of our capital stock and summarizes certain provisions of our certificate of incorporation and bylaws. This summary does not purport to be complete and is qualified in its entirety by the provisions of our certificate of incorporation and bylaws, which have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part, and to the applicable provisions of Delaware law.

Our authorized capital stock consists of 550,000,000 shares, with a par value of \$0.001 per share, of which:

- 500,000,000 shares are designated as common stock; and
- 50,000,000 shares are designated as preferred stock.

Common Stock

Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally and do not have cumulative voting rights. Subject to the preferences that may be applicable to any preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefor, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding shares of preferred stock. The holders of shares of common stock have no preemptive or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock.

Our common stock is listed on the Nasdaq Capital Market under the symbol "PLSE." The transfer agent and registrar for our common stock is Broadridge Corporate Issuers Solutions, Inc.

Preferred Stock

The following description of preferred stock is not complete. These descriptions are qualified in their entirety by reference to our certificate of incorporation and the certificate of designation relating to any series of preferred stock. The rights, preferences, rights and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series. Under the terms of our certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors may designate the powers, designations, preferences, and relative participation, optional or other rights, if any, and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, redemption rights, liquidation preference, sinking fund terms and the number of shares constituting any series or the designation or any series. There are no restrictions presently on the repurchase or redemption of any shares of our preferred stock.

The issuance of shares of preferred stock will affect, and may adversely affect, the rights of holders of common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until our board of directors determines the specific rights attached to that preferred stock. The effects of issuing additional preferred stock could include one or more of the following:

- restricting dividends on the common stock;
- diluting the voting power of the common stock;
- impairing the liquidation rights of the common stock; or
- delaying or preventing changes in control or management of our company.

Registration Rights

Underwriters' Warrants

In connection with the Underwriting Agreement, dated May 17, 2016, between the Company and MDB, as representative of the underwriters, we issued warrants to purchase 574,985 shares of our common stock. Pursuant to such warrants, we agreed, upon request, to file a registration statement to cover the resale of shares issuable upon exercise of such warrants, and to keep such registration statement effective until the date on which all of the shares registered for sale or resale under such registration statement are either sold pursuant to such registration statement or can be sold publicly without restriction or limitation under Rule 144 under the Securities Act.

Purchase Agreements

On February 7, 2017, we entered into a Purchase Agreement (the “February Purchase Agreement”) with certain investors pursuant to which we issued and sold in a private placement a total of 819,673 shares of common stock. Pursuant to the February Purchase Agreement, we agreed to file a registration statement to cover the resale of the shares issued to the investors, and to keep such registration statement effective until the date on which all of the shares registered for sale or resale under such registration statement are either sold pursuant to such registration statement or can be sold publicly without restriction or limitation under Rule 144 under the Securities Act.

On September 24, 2017, we entered into a Purchase Agreement (the “September Purchase Agreement”) with an investor pursuant to which we issued and sold in a private placement a total of 2,000,000 shares of common stock. Pursuant to the September Purchase Agreement, we agreed to file a registration statement to cover the resale of the shares issued to the investor, and to keep such registration statement effective until the date on which all of the shares registered for sale or resale under such registration statement are either sold pursuant to such registration statement or can be sold publicly without restriction or limitation under Rule 144 under the Securities Act.

Effect of Certain Provisions of our Certificate of Incorporation and Bylaws and the Delaware Anti-Takeover Statute

Some provisions of Delaware law and our certificate of incorporation and bylaws contain provisions that could make the following transactions more difficult:

- acquisition of us by means of a tender offer;
- acquisition of us by means of a proxy contest or otherwise; or
- removal of our incumbent officers and directors.

Those provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Certificate of Incorporation and Bylaws

Our certificate of incorporation and our bylaws provide for the following:

- *Undesignated Preferred Stock.* The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of our company. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.
- *Stockholder Meetings.* Our bylaws provide that in general a special meeting of stockholders may be called only by our board of directors, the chairman of our board of directors, any of our officers, or any stockholder holding at least fifteen percent (15%) of the voting power of the capital stock issued and outstanding and entitled to vote.
- *Requirements for Advance Notification of Stockholder Nominations and Proposals.* Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of the board of directors.
- *Limits on Ability of Stockholders to Act by Written Consent.* We have provided in our bylaws that our stockholders may not act by written consent. This limit on the ability of our stockholders to act by written consent may lengthen the amount of time required to take stockholder actions. As a result, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a meeting of our stockholders called in accordance with our bylaws.
- *Amendment of Certificate of Incorporation and Bylaws.* The amendment of the above provisions of our certificate of incorporation and bylaws requires approval by holders of at least two-thirds of our outstanding capital stock entitled to vote generally in the election of directors.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not for determining the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers, and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns 15% or more of a corporation's outstanding voting stock or is an affiliate or associate of a corporation and was the owner of 15% or more of the corporation's outstanding voting stock within three years prior to the determination of interested stockholder status.

DILUTION

Our net tangible book value as of December 31, 2019 was approximately \$17.79 million, or \$0.85 per share of our common stock. Net tangible book value per share is equal to our total net tangible book value, which is our total tangible assets less our total liabilities, divided by the number of shares of our outstanding common stock. Dilution per share equals the difference between the amount per share paid by purchasers of shares of common stock that are included in the Units offered in the rights offering and the net tangible book value per share of our common stock immediately after the rights offering.

After giving effect to the assumed sale of [•] Units in the rights offering (consisting of [•] shares of our common stock and warrants to purchase an aggregate of [•] shares of common stock upon exercise), based on the assumed subscription price of \$7.01 per Unit (the Initial Price), and after deducting estimated offering expenses payable by us, our pro forma net tangible book value as of December 31, 2019 would have been approximately \$[•], or \$[•] per share. This represents an immediate increase in pro forma net tangible book value to existing stockholders of \$[•] per share and an immediate dilution to purchasers in the rights offering of \$[•] per share.

The following table illustrates this per-share dilution (assuming a fully subscribed for rights offering of [•] Units at the assumed subscription price of \$[•] per Unit) (the Initial Price), but excluding the issuance of shares of common stock upon exercise of warrants. To the extent that the Alternate Price is lower than the Initial Price, purchasers of our common stock in the rights offering will experience further dilution.

Assumed subscription price per share	\$7.01
Net tangible book value per share at December 31, 2019	\$0.85
Net increase per share attributable to the rights offering	<u>\$ [•]</u>
Pro forma net tangible book value per share after giving effect to the rights offering	<u>\$ [•]</u>
Dilution in net tangible book value per share to purchasers	<u>\$ [•]</u>

The information above is illustrative only and will adjust based on the actual subscription price and the actual number of Units sold in the rights offering. The number of shares to be outstanding after this rights offering is based on 20,825,469 shares of common stock outstanding as of December 31, 2019 and excludes:

- 3,749,186 shares of common stock subject to options outstanding as of December 31, 2019, with a weighted average exercise price of \$16.18 per share;
- 42,500 performance stock options granted during the year ended December 31, 2019;
- 215,500 shares of common stock subject to options granted subsequent to December 31, 2019, with a weighted average exercise price of \$5.76 per share;
- 167,847 shares of common stock that have been reserved for issuance upon the exercise of outstanding warrants as of December 31, 2019, with a weighted average exercise price of \$4.36;
- 222,606 shares of our common stock subject to outstanding restricted stock units as of December 31, 2019;
- 998,288 shares of common stock reserved for future issuance under our 2017 Equity Incentive Plan and as of December 31, 2019 (not including 833,018 shares reserved for issuance thereunder subsequent to December 31, 2019);
- 78,950 shares of common stock reserved for future issuance under our 2017 Inducement Equity Incentive Plan as of December 31, 2019;
- 440,195 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan as of December 31, 2019; and
- the shares of common stock issuable upon exercise of the warrants offered hereby.

To the extent that any options or warrants are exercised, RSUs vest, new options are issued under our equity incentive plans or we otherwise issue additional shares of common stock in the future at a price less than the public offering price, there will be further dilution to new investors.

THE RIGHTS OFFERING

Subscription Rights

Basic Subscription Rights

We will distribute to each holder of our common stock who is a record holder of our common stock on the record date, which is May 14, 2020 at no charge, one non-transferable subscription right for each share of common stock owned. The subscription rights will be evidenced by non-transferable subscription rights certificates. Each subscription right will entitle the rights holder to purchase [•] Units at the Initial Price, which shall be paid in cash, upon timely delivery of the required documents and payment of the subscription price. Each Unit consists of one share of our common stock at the Initial Price and 0.15 warrants to purchase shares of our common stock. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units, but we will not sell fractional Units. If rights holders wish to exercise their subscription rights, they must do so prior to 5:00 p.m., Eastern Time, on June 8, 2020, the Expiration Date for the rights offering, subject to extension. After the Expiration Date, the subscription rights will expire and will have no value. See below “—Expiration of the Rights Offering and Extensions, Amendments and Termination.” You are not required to exercise all of your subscription rights. We will issue to the record holders who purchase Units in the rights offering the shares and warrants in book-entry, or uncertificated, form as soon as practicable after the rights offering has expired.

Over-Subscription Rights

Subject to the allocation described below, each subscription right also grants the holder an over-subscription right to purchase additional Units that are not purchased by other rights holders pursuant to their basic subscription rights. You are entitled to exercise your over-subscription right only if you exercise your basic subscription right in full.

If you wish to exercise your over-subscription right, you should indicate the number of additional Units that you would like to purchase in the space provided on your rights certificate, as well as the number of shares that you beneficially own without giving effect to any Units to be purchased in this rights offering. When you send in your rights certificate, you must also send the full purchase price, as provided herein, for the number of additional Units that you have requested to purchase (in addition to the payment, as provided herein, due for Units purchased through your basic subscription right). If the number of Units remaining after the exercise of all basic subscription rights is not sufficient to satisfy all requests for Units pursuant to over-subscription rights, you will be allocated additional Units in the proportion which the number of Units you purchased through the basic subscription right bears to the total number of Units that all oversubscribing stockholders purchased through the basic subscription right. The subscription agent will return any excess payments in the form in which made.

As soon as practicable after the Expiration Date, the subscription agent will determine the number of Units that you may purchase pursuant to the over-subscription right. If you request and pay for more Units than are allocated to you, we will refund the overpayment in the form in which made. You will not receive a refund or other compensation for any unissued fractional warrants. In connection with the exercise of the over-subscription right, custodian banks, brokers, dealers and other nominee holders of subscription rights who act on behalf of beneficial owners will be required to certify to us and to the subscription agent as to the aggregate number of subscription rights exercised, and the number of Units requested through the over-subscription right, by each beneficial owner on whose behalf the nominee holder is acting.

Subscription Price

The subscription price per Unit will be the lesser of (i) \$7.01 (the “Initial Price”) and (ii) the volume weighted average price of our common stock for the five trading period through and including the Expiration Date (the “Alternate Price”). Subscribers must fund their subscriptions pursuant to both the basic subscription right and over-subscription right at the Initial Price.

In determining the subscription price, our board of directors, with the advice and input of management and advisors, considered a number of factors, including: the likely cost of capital from other sources and general conditions of the securities markets, the price at which our stockholders might be willing to participate in the rights offering, historical and current trading prices for our common stock, our need for liquidity and capital, the value of the warrants being issued as a component of the Unit, and the desire to provide an opportunity to our stockholders

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to participate in the rights offering on a pro rata basis. In conjunction with its review of these factors, our board of directors also reviewed a range of subscription prices in various prior rights offerings of public companies. The subscription price is not necessarily related to our book value, net worth or any other established criteria of value and may or may not be considered the fair value of our Units to be offered in the rights offering. You should not consider the subscription price as an indication of value of us or our common stock. The market price of our common stock may decline during or after the rights offering, including below the subscription price for the Units. You should obtain a current quote for our common stock before exercising your subscription rights and make your own assessment of our business and financial condition, our prospects for the future, and the terms of the rights offering.

Warrants

Each warrant entitles the holder to purchase one share of our common stock at an exercise price that shall be equal to the subscription price for the Units. The exercise price must be paid in cash at the time of exercise and there is no “cashless” exercise provision for the warrants. Each warrant will be exercisable immediately upon completion of this rights offering and will expire on the fifth anniversary of the completion of this rights offering. The warrants will be subject to redemption by the Company for \$0.01 per warrant, on not less than 30 days written notice, if the volume weighted average price of our common stock equals or exceeds 200% of the exercise price for the warrants, subject to adjustment, per share, for 10 consecutive trading days, provided that we may not redeem the warrants prior to the date that is six months after the issuance date. The warrants will be adjusted to reflect any stock split, stock dividend or similar recapitalization with respect to the common stock. The warrants will not be listed for trading on any stock exchange or market. Broadridge Corporate Issuer Solutions, Inc. is acting as the warrant agent for the warrants.

Expiration of the Rights Offering and Extensions, Amendments and Termination

You may exercise your subscription rights at any time prior to 5:00 p.m., Eastern Time, on June 8, 2020, the Expiration Date for the rights offering. If you do not exercise your subscription rights before the Expiration Date of the rights offering, your subscription rights will expire and will have no value. We will not be required to sell Units to you if the subscription agent receives your rights certificate or payment, after the Expiration Date, regardless of when you sent the rights certificate and payment.

We may, in our sole discretion, extend the time for exercising the subscription rights. We may extend the Expiration Date at any time after the record date. If the commencement of the rights offering is delayed for a period of time, the Expiration Date of the rights offering may be similarly extended. We will extend the duration of the rights offering as required by applicable law, and may choose to extend the duration of the rights offering for any reason. We may extend the Expiration Date of the rights offering by giving oral or written notice to the subscription agent on or before the scheduled Expiration Date. If we elect to extend the Expiration Date of the rights offering, we will issue a press release announcing such extension no later than 9:00 a.m., Eastern Time, on the next business day after the most recently announced Expiration Date.

We reserve the right, in our sole discretion, to amend or modify the terms of the rights offering. We also reserve the right to terminate the rights offering at any time prior to the Expiration Date for any reason, in which event all funds received in connection with the rights offering will be returned without interest or deduction to those persons who exercised their subscription rights as soon as practicable.

Calculation of Subscription Rights Exercised; Missing or Incomplete Subscription Information

If you do not indicate the number of subscription rights being exercised, or do not forward full payment of the total subscription price payment for the number of subscription rights that you indicate are being exercised, then you will be deemed to have exercised your subscription rights with respect to the maximum number of whole Units that may be exercised with the aggregate subscription price payment you delivered to the subscription agent. If your aggregate subscription price payment is greater than the amount you owe for exercise of your basic subscription right in full, you will be deemed to have exercised your over-subscription right to purchase the maximum number of Units with your over-payment.

If an insufficient number of Units is available to fully satisfy all over-subscription right requests, the available Units will be distributed proportionately among rights holders who exercise their oversubscription right based on the number of Units each rights holder subscribed for under the basic subscription right. The proration process will be repeated until all Units have been allocated or all oversubscription exercises have been fulfilled, whichever occurs

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earlier. Any excess subscription payments received by the subscription agent caused by proration will be returned by the subscription agent to you by mail, without interest or penalty, as soon as practicable after the Expiration Date of the rights offering. The subscription agent will return any excess payments in the form in which it was made. You will not receive a refund or other compensation for any unissued fractional warrants. Any Excess Subscription Amount resulting from the reduction of the subscription price from the Initial Price to the Alternate Price will be put towards the purchase of additional Units (either towards your basic subscription right, if available, or towards the over-subscription right if you have already exercised your basic subscription right in full).

No Fractional Shares

As we will not sell fractional Units, and each Unit is comprised of one share of common stock, we will not issue fractional shares of common stock in the rights offering. The number of warrants issued to you will be calculated by rounding down to the nearest whole number the product computed by multiplying the number of Units subscribed for in the rights offering by a factor of 0.15. Rights holders will only be entitled to purchase a whole number of Units representing a whole number of shares of common stock, rounded down to the nearest whole number of Units a holder would otherwise be entitled to purchase. Any Excess Subscription Amount resulting from the reduction of the subscription price from the Initial Price to the Alternate Price will be put towards the purchase of additional Units (either towards your basic subscription right, if available, or towards the over-subscription right if you have already exercised your basic subscription right in full). The excess amount for any fractional Units will be returned to you as soon as practicable, in the form in which made. You will not receive interest or a deduction on any payments refunded to you under the rights offering. No subscriber will receive a refund or other compensation for any unissued fractional warrants.

No Recombination

The common stock and warrants comprising the Units will separate upon the closing of this rights offering and will be issued separately; however, they may only be purchased as a Unit and the Unit will not trade as a separate security. Holders may not recombine shares of common stock and warrants to receive a Unit.

Conditions to the Rights Offering

We may terminate the rights offering, in whole or in part, if at any time before completion of the rights offering there is any judgment, order, decree, injunction, statute, law or regulation entered, enacted, amended or held to be applicable to the rights offering that in the sole judgment of our board of directors would or might make the rights offering or its completion, whether in whole or in part, illegal or otherwise restrict or prohibit completion of the rights offering. We may waive any of these conditions and choose to proceed with the rights offering even if one or more of these events occur. If we terminate the rights offering, in whole or in part, all affected subscription rights will expire without value and all subscription payments in the form in which received by the subscription agent will be returned in the form in which paid, without interest or deduction, as soon as practicable. See also “—Expiration of the Rights Offering and Extensions, Amendments and Termination.”

Method of Exercising Subscription Rights

The exercise of subscription rights is irrevocable and may not be cancelled or modified. Your subscription rights will not be considered exercised unless the subscription agent receives from you, your custodian bank, broker, dealer or nominee, as the case may be, all of the required documents properly completed and executed and your full subscription price payment in cash, as provided herein, prior to the Expiration Date of the rights offering, which is currently set to be 5:00 p.m., Eastern Time, on June 8, 2020. Rights holders may exercise their rights as follows:

Subscription by Registered Holders

Rights holders who are registered holders of our common stock as of the record date may exercise their subscription right by properly completing and executing the rights certificate together with any required signature guarantees and forwarding it, together with payment in full, as provided herein, of the subscription price for each Unit for which they subscribe, to the subscription agent at the address set forth under the subsection titled “—Delivery of Subscription Materials and Payment,” on or prior to the Expiration Date.

Subscription by DTC Participants

Banks, trust companies, securities dealers and brokers (each, a “Nominee”) that hold shares of our Common Stock on the Record Date as nominee for more than one beneficial owner may, upon proper showing to the subscription agent, exercise such beneficial owner’s subscription right through DTC on the same basis as if the

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beneficial owners were stockholders on the Record Date. Such Nominee may exercise the subscription right on behalf of the exercising beneficial owner through DTC's PSOP Function on the "agents subscription over PTS" procedure by (1) providing a certification as to the aggregate number of subscription rights exercised by the beneficial owner on whose behalf such Nominee is acting, and (2) instructing DTC to charge the Nominee's applicable DTC account for the subscription payment for the new Units to facilitate the delivery of the full subscription payment to the subscription agent. DTC must receive the subscription instructions and payment for the new Units no later than the Expiration Date.

Subscription by Beneficial Owners

Rights holders who are beneficial owners of shares of our common stock as of the record date and whose shares are registered in the name of a custodian bank, broker, dealer or other nominee, or would prefer to have an institution conduct the transaction relating to the rights on their behalf, should instruct their custodian bank, broker, dealer or other nominee or institution to exercise their rights and deliver all documents and payment, on their behalf, prior to the Expiration Date. A rights holder's subscription rights will not be considered exercised unless the subscription agent receives from such rights holder or the rights holder's custodian bank, broker, dealer, or other nominee or institution, as the case may be, all of the required documents and such holder's full subscription price payment.

Method of Payment

You must timely pay the full subscription price, in U.S. currency, for the full number of Units at the Initial Price you wish to acquire pursuant to the exercise of rights (including any exercise of the over-subscription rights, if available) by delivering:

- an uncertified check drawn against a U.S. bank payable to "Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)";
- a wire transfer of immediately available funds to accounts maintained by the subscription agent;
- a certified check, bank draft, or cashier's check drawn against a U.S. bank payable to "Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)"; or
- a U.S. Postal money order payable to "Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)".

Rights certificates received after the Expiration Date of the rights offering will not be honored, and we will return your payment to you in the form received as soon as practicable, without interest or deduction.

The subscription agent will be deemed to receive payment upon:

- clearance of any uncertified check deposited by the subscription agent;
- receipt of collected funds wired in the subscription agent's account;
- receipt by the subscription agent of any certified check, bank draft, or cashier's check drawn upon a U.S. bank; or
- receipt by the subscription agent of any U.S. Postal money order.

If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amounts paid by a subscriber will be put towards the purchase of additional Units.

Clearance of Uncertified Personal Checks

If you are paying by uncertified personal check, please note that payment will not be deemed to have been received by the subscription agent until the check has cleared, which could take at least five (5) business days. Any personal check used to pay for Units must clear the appropriate financial institutions prior to 5:00 p.m., Eastern Time, on June 8, 2020, the expected Expiration Date of this rights offering, unless we, in our sole discretion, extend the period for exercising the subscription rights. Accordingly, holders that wish to pay the subscription price by means of an uncertified personal check are urged to make payment sufficiently in advance of the expiration of the rights offering to ensure such payment is received and clears by such date. If you elect to exercise your subscription rights, we urge you to consider using a certified check, cashier's check, bank draft, U.S. Postal money order, or wire transfer of funds to ensure that the subscription agent receives your funds prior to the expiration of the rights offering.

Instructions for Completing Your Subscription Rights Certificate

You should read the instruction letter accompanying the rights certificate carefully and strictly follow it. **DO NOT SEND RIGHTS CERTIFICATES OR PAYMENTS TO THE COMPANY.** We will not consider your subscription received until the subscription agent has received delivery of a properly completed and duly executed rights certificate and payment of the full subscription amount. The risk of delivery of all documents and payments is on you or your nominee, not us or the subscription agent.

The method of delivery of rights certificates and payment of the subscription amount to the subscription agent will be at the risk of the holders of rights, but, if sent by mail, we recommend that you send those certificates and payments by overnight courier or by registered mail, properly insured, with return receipt requested, and that a sufficient number of days be allowed to ensure delivery to the subscription agent and clearance of payment before the expiration of the subscription period.

Unless a rights certificate provides that the shares of common stock and warrants are to be delivered to the record holder of such rights or such certificate is submitted for the account of a bank or a broker, signatures on such rights certificate must be guaranteed by an “Eligible Guarantor Institution,” as such term is defined in Rule 17Ad-15 of the Securities Exchange Act of 1934 (an “Eligible Institution”), subject to any standards and procedures adopted by the subscription agent. See “—Medallion Guarantee May Be Required.”

Medallion Guarantee May Be Required

If you completed any part of the subscription rights certificate to provide that the common stock and warrants that comprise the Units purchased pursuant to your exercise of Subscription Rights were to be (x) issued in a name other than that of the registered holder, or (y) issued to an address other than that shown on the front of the subscription rights certificate, your signature on each subscription rights certificate must be guaranteed by an Eligible Institution, such as a member firm of a registered national securities exchange or a member of the Financial Industry Regulatory Authority, Inc., or a commercial bank or trust company having an office or correspondent in the United States, or by a member of a Stock Transfer Association approved medallion program such as STAMP, SEMP or MSP subject to standards and procedures adopted by the subscription agent.

Subscription and Information Agent

The subscription agent and information agent for this rights offering is Broadridge Corporate Issuer Solutions, Inc. We will pay all fees and expenses of Broadridge related to the rights offering and have also agreed to indemnify Broadridge from certain liabilities that it may incur in connection with the rights offering. Broadridge can be contacted at the following address and telephone number:

Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718
Toll Free: 1-888-789-8409

Delivery of Subscription Materials and Payment

You should deliver your subscription rights certificate and payment of the subscription price, as provided herein, or, if applicable, nominee holder certifications, to the subscription agent by one of the methods described below:

By mail:
*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718*

By overnight courier:
*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS IWS
51 Mercedes Way
Edgewood, NY 11717*

Your delivery to an address or by any method other than as set forth above will not constitute valid delivery and we may not honor the exercise of your subscription rights.

You should direct any questions or requests for assistance concerning the method of subscribing for Units or for additional copies of this prospectus to the information agent.

Funding Arrangements; Return of Funds

Broadridge Corporate Issuer Solutions, Inc., the subscription agent, will hold funds received in payment for Units in a segregated account pending completion of the rights offering. The subscription agent will hold this money until the rights offering is completed or is withdrawn or terminated. If the rights offering is canceled for any reason, all subscription payments received by the subscription agent will be returned to subscribers, without interest or penalty, as soon as practicable.

Guaranteed Delivery

There is no guaranteed delivery period in connection with this rights offering, so you must ensure that you properly complete all required steps prior to 5:00 p.m., Eastern Time, on June 8, 2020, unless we decide to extend the rights offering Expiration Date until some later time or terminate it earlier.

Notice to Beneficial Holders

If you are a broker, a trustee or a depository for securities who holds shares of our common stock for the account of others as of the record date, you should notify the respective beneficial owners of such shares of the rights offering as soon as possible to find out their intentions with respect to exercising their subscription rights. You should obtain instructions from the beneficial owners with respect to their subscription rights, as set forth in the instructions we have provided to you for your distribution to beneficial owners. If a beneficial owner so instructs, you should complete the appropriate subscription rights certificates and submit them to the subscription agent with the proper payment. If you hold shares of our common stock for the account(s) of more than one beneficial owner, you may exercise the number of subscription rights to which all such beneficial owners in the aggregate otherwise would have been entitled had they been direct record holders of our common stock on the record date, provided that you, as a nominee record holder, make a proper showing to the subscription agent by submitting the form entitled “Nominee Holder Certification” substantially in the form accompanying this prospectus. If you did not receive this form, you should contact the subscription agent to request a copy.

Beneficial Owners

If you are a beneficial owner of shares of our common stock or will receive subscription rights through a custodian bank, broker, dealer or other nominee, we will ask your custodian bank, broker, dealer or other nominee to notify you of the rights offering. If you wish to exercise your subscription rights, you will need to have your custodian bank, broker, dealer or other nominee act for you. If you hold shares of our common stock directly under your name in stock certificate(s) or in book-entry, or uncertificated, form, but would prefer to have your custodian bank, broker, dealer or other nominee act for you, you should contact your nominee and request it to effect the transactions for you. Your nominee may establish a deadline prior to the Expiration Date by which you must provide it with your instructions to exercise your subscription rights and payment for your shares.

To indicate your decision with respect to your subscription rights, you should complete and return to your custodian bank, broker, dealer or other nominee the form entitled “Beneficial Owners Election Form” substantially in the form accompanying this prospectus. You should receive the “Beneficial Owners Election Form” from your custodian bank, broker, dealer or other nominee with the other rights offering materials. If you wish to obtain a separate subscription rights certificate, you should contact the nominee as soon as possible and request that a separate subscription rights certificate be issued to you. You should contact your custodian bank, broker, dealer or other nominee if you do not receive this form but you believe you are entitled to participate in the rights offering. We are not responsible if you do not receive this form from your custodian bank, broker, dealer or nominee or if you receive it without sufficient time to respond.

Determinations Regarding the Exercise of Your Subscription Rights

We will decide all questions concerning the timeliness, validity, form and eligibility of the exercise of your subscription rights and any such determinations by us will be final and binding. We, in our sole discretion, may waive, in any particular instance, any defect or irregularity, or permit, in any particular instance, a defect or irregularity to be corrected within such time as we may determine. We will not be required to make uniform determinations in all cases. We may reject the exercise of any of your subscription rights because of any defect or irregularity. We will not accept any exercise of subscription rights until all irregularities have been waived by us or cured by you within such time as we decide, in our sole discretion. Our interpretations of the terms and conditions of the rights offering will

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be final and binding. Neither we, nor the subscription agent, will be under any duty to notify you of any defect or irregularity in connection with your submission of subscription rights certificates and we will not be liable for failure to notify you of any defect or irregularity. We reserve the right to reject your exercise of subscription rights if your exercise is not in accordance with the terms of the rights offering or in proper form. We will also not accept the exercise of your subscription rights if our sale of Units to you could be deemed unlawful under applicable law.

No Revocation or Change

Once you submit the form of rights certificate to exercise any subscription rights, you may not revoke or change your exercise or request a refund of monies paid. All exercises of rights are irrevocable, even if you subsequently learn information about us that you consider to be unfavorable. You should not exercise your rights unless you are certain that you wish to purchase additional Units at the Initial Price.

Non-Transferability of the Rights

The subscription rights and Units granted to you are non-transferable and, therefore, may not be assigned, gifted, purchased, sold or otherwise transferred to anyone else. Notwithstanding the foregoing, you may transfer your rights, Units and warrants as required by operation of law; for example, a transfer of rights to the estate of the recipient upon the death of the recipient would be permitted. If the rights are transferred as permitted, evidence satisfactory to us that the transfer was proper must be received by us prior to the Expiration Date.

Issuance of Common Stock and Warrants

All shares of our common stock and warrants that you purchase in the rights offering as part of the Units will be issued in book-entry, or uncertificated, form, meaning that you will receive a direct registration (DRS) account statement from our transfer agent reflecting ownership of these securities if you are a holder of record of shares or warrants. If you hold your shares of common stock in the name of a custodian bank, broker, dealer, or other nominee, DTC will credit your account with your nominee with the securities you purchased in the Rights Offering. Subject to state securities laws and regulations, we have the discretion to delay distribution of any securities you may have elected to purchase by exercise of your rights in order to comply with state securities laws.

Validity of Subscriptions

We will resolve all questions regarding the validity and form of the exercise of your subscription rights, including time of receipt and eligibility to participate in the rights offering. Our determination will be final and binding. Once made, subscriptions and directions are irrevocable, and we will not accept any alternative, conditional or contingent subscriptions or directions. We reserve the absolute right to reject any subscriptions or directions not properly submitted or the acceptance of which would be unlawful. You must resolve any irregularities in connection with your subscriptions before the subscription period expires, unless waived by us in our sole discretion. Neither the subscription agent nor we shall be under any duty to notify you or your representative of defects in your subscriptions. A subscription will be considered accepted, subject to our right to cancel the rights offering, only when a properly completed and duly executed subscription rights certificate and any other required documents and payment of the full subscription amount have been received by the subscription agent (and any payment by uncertified personal check has cleared) and any defects or irregularities therein waived by us. Our interpretations of the terms and conditions of the rights offering will be final and binding.

Rights of Subscribers

You will have no rights as a holder of the shares of our common stock you purchase in the rights offering until shares are issued in book-entry form or your account at your broker, dealer, bank or other nominee is credited with the shares of our common stock purchased in the rights offering. Holders of warrants issued in connection with the rights offering will not have rights as holders of our common stock until such warrants are exercised and the shares of common stock underlying the warrants are issued to the holder. You will have no right to revoke your subscriptions after you deliver your completed rights certificate, subscription payment, as provided herein, and any other required documents to the subscription agent.

Foreign Stockholders and Stockholders with Army Post Office or Fleet Post Office Addresses

The subscription agent will not mail rights certificates to you if you are a stockholder whose address is outside the United States or if you have an Army Post Office or a Fleet Post Office address. Instead, we will have the subscription agent hold the subscription rights certificates for your account. To exercise your rights, you must notify

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the subscription agent prior to 11:00 a.m., Eastern Time, at least three (3) business days prior to the Expiration Date, and establish to the satisfaction of the subscription agent that it is permitted to exercise your subscription rights under applicable law. If you do not follow these procedures by such time, your rights will expire and will have no value.

No Board of Directors Recommendation

An investment in Units (and the common stock and warrants that comprise such Units) must be made according to your evaluation of your own best interests and after considering all of the information herein, including the section titled “Risk Factors” beginning on page 20 of this prospectus. Neither we nor our board of directors are making any recommendation regarding whether you should exercise your subscription rights.

Purchase Commitments

Robert W. Duggan has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so.

Shares of Common Stock Outstanding After the Rights Offering

The number of shares of our common stock that will be outstanding after the rights offering will depend on the number of Units that are purchased in the rights offering. Assuming no additional shares of common stock are issued by us prior to consummation of the rights offering and assuming all offered Units are sold in the rights offering at the Initial Price, we will issue approximately [•] shares of common stock. In that case, we will have approximately [•] shares of common stock outstanding after the rights offering. This would represent an increase of approximately [•]% in the number of outstanding shares of common stock. We would also issue warrants to purchase approximately an additional [•] shares of our common stock. To the extent that the Alternate Price is lower than the Initial Price, we will sell additional Units, each consisting of one share of common stock and 0.15 warrants to purchase shares of our common stock in the rights offering, and the number of shares of common stock and warrants to purchase common stock outstanding after the rights offering will accordingly be higher.

Fees and Expenses

Neither we, nor the subscription agent, will charge a brokerage commission or a fee to subscription rights holders for exercising their rights. However, if you exercise your subscription rights through a custodian bank, broker, dealer or nominee, you will be responsible for any fees charged by your custodian bank, broker, dealer or nominee.

Questions About Exercising Subscription Rights

If you have any questions or require assistance regarding the method of exercising your subscription rights or requests for additional copies of this document or any document mentioned herein, you should contact the subscription agent at the address and telephone number set forth above under “— Delivery of Subscription Materials and Payment.”

No “Going Private” Transaction

The rights offering is not a transaction or series of transactions which has either a reasonable likelihood or a purpose of producing a “going private effect” as specified in Rule 13e-3 of the Exchange Act. Given the structure of the rights offering, as described in this prospectus, Pulse Biosciences will continue to be registered pursuant to Section 12 of the Exchange Act and intends to remain listed on the Nasdaq Capital Market following completion of the rights offering.

Other Matters

Pulse Biosciences is not making the rights offering in any state or other jurisdiction in which it is unlawful to do so, nor is Pulse Biosciences distributing or accepting any offers to purchase any of our securities from subscription rights holders who are residents of those states or of other jurisdictions or who are otherwise prohibited by federal or state laws or regulations to accept or exercise the subscription rights. Pulse Biosciences may delay the commencement of the rights offering in those states or other jurisdictions, or change the terms of the rights offering, in whole or in part, in order to comply with the securities law or other legal requirements of those states or other jurisdictions. Subject to state securities laws and regulations, Pulse Biosciences also has the discretion to delay

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allocation and distribution of any securities you may elect to purchase by exercise of your subscription rights in order to comply with state securities laws. Pulse Biosciences may decline to make modifications to the terms of the rights offering requested by those states or other jurisdictions, in which case, if you are a resident in one of those states or jurisdictions or if you are otherwise prohibited by federal or state laws or regulations from accepting or exercising the subscription rights you will not be eligible to participate in the rights offering.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following summary does not purport to be a complete analysis of all of the potential U.S. federal income tax considerations, and does not address any tax consequences arising under any state, local or non-U.S. tax laws or any other U.S. federal tax laws, including the U.S. federal estate or gift tax laws. This discussion applies only to holders that are U.S. persons (as defined below) and does not address all aspects of U.S. federal income taxation that may be relevant to holders in light of their particular circumstances or to holders who may be subject to special tax treatment under the Code, including, without limitation, holders who are dealers in securities or non-U.S. currency, non-U.S. persons, certain former citizens or long-term residents of the United States, insurance companies, tax-exempt organizations, banks, financial institutions or broker-dealers, holders who hold our common stock as part of a hedge, straddle, conversion or other risk reduction transaction, or holders who acquired our common stock pursuant to the exercise of compensatory stock options or otherwise as compensation.

This summary is of a general nature only and is not intended to constitute a complete analysis of all tax consequences relating to the receipt, exercise and expiration of the subscription rights, the ownership and disposition of our common stock and warrants acquired upon exercise of the subscription rights and the ownership and disposition of our common stock acquired upon exercise of the warrants. It is not intended to constitute, and should not be construed to constitute, legal or tax advice to any particular holder. This discussion neither binds nor precludes the Internal Revenue Service (“IRS”) from adopting a position contrary to, or otherwise challenging, the positions addressed in this prospectus, and we cannot assure you that such a contrary position could not be asserted successfully by the IRS or adopted by a court if the position or matter was litigated. We have not sought, and will not seek, either (i) a ruling from the IRS or (ii) an opinion from legal counsel, in either instance regarding the tax considerations discussed herein. Holders should consult their own tax advisors as to the tax consequences in their particular circumstances.

For purposes of this discussion, a “U.S. person” means a beneficial owner of subscription rights that is:

- An individual who is a citizen or resident of the United States;
- A corporation (or entity treated as a corporation for U.S. federal income tax purposes) created or organized, or treated as created or organized, in or under the laws of the United States, any state thereof or the District of Columbia;
- An estate whose income is subject to U.S. federal income tax regardless of its source; or
- A trust (i) if a U.S. court can exercise primary supervision over the trust’s administration and one or more U.S. persons are authorized to control all substantial decisions of the trust, or (ii) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

If a partnership (including any entity treated as a partnership for U.S. federal income tax purposes) receives the subscription rights or holds the stock received upon exercise of the subscription right, the tax treatment of a partner in such partnership generally will depend upon the status of the partner and the activities of the partnership. Such a partner and the partnership are urged to consult their own tax advisors as to the U.S. federal income tax consequences of receiving the subscription rights and exercising (or allowing to expire) the subscription right.

EACH HOLDER OF SHARES OF OUR COMMON STOCK IS STRONGLY URGED TO CONSULT SUCH HOLDER’S OWN TAX ADVISORS REGARDING THE SPECIFIC FEDERAL, STATE, LOCAL AND NON-U.S. INCOME AND OTHER TAX CONSIDERATIONS OF THE RECEIPT AND EXERCISE OF THE SUBSCRIPTION RIGHTS, THE OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK AND WARRANTS ACQUIRED UPON EXERCISE OF THE SUBSCRIPTION RIGHTS AND THE OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ACQUIRED UPON EXERCISE OF THE WARRANTS.

U.S. Federal Income Tax Considerations Applicable to the Receipt of Subscription Rights

Receipt of Subscription Rights

Although the authorities governing transactions such as this rights offering are complex and unclear in certain respects, we believe and intend to take the position that the distribution of subscription rights to a holder with respect to such holder’s shares of common stock should generally be treated, for U.S. federal income tax purposes, as a non-taxable distribution.

However, the general rule regarding nonrecognition is subject to certain exceptions, including if receipt by a holder of subscription rights is part of a “disproportionate distribution.” A “disproportionate distribution” is a distribution or a series of distributions, including deemed distributions, that has the effect of the receipt of cash or other property by some holders and an increase in the proportionate interest of other holders in our assets or earnings and profits. During the last 36 months, we have not made any distributions of cash or other property with respect to our stock, nor do we have any current intention of making any distributions with respect to our stock. Currently, our common stock is our sole outstanding class of stock, and we have no current intention of issuing another class of stock or convertible debt. However, the fact that we have outstanding options, warrants and similar equity-based awards could cause, under certain circumstances that cannot currently be predicted, the receipt of subscription rights pursuant to this rights offering to be part of a disproportionate distribution. The Company intends to take the position that the outstanding options, warrants and similar equity-based awards do not cause the subscription rights issued pursuant to this rights offering to be part of a disproportionate distribution, but there can be no assurances in this regard.

Our position regarding the tax-free treatment of the receipt of subscription rights is not binding on the IRS or the courts. If this position is finally determined to be incorrect, whether on the basis that the issuance of the subscription rights is a “disproportionate distribution” or otherwise, the fair market value of the subscription rights would be taxable to holders of our common stock as a dividend to the extent of the holder’s pro rata share of our current and accumulated earnings and profits, if any, with any excess being treated as a return of capital to the extent of the holder’s basis in shares of our common stock and thereafter as capital gain. Although no assurance can be given, it is anticipated that we will not have current and accumulated earnings and profits through the end of 2020.

The following discussion assumes that the receipt by a holder of subscription rights with respect to such holder’s common stock pursuant to this rights offering is non-taxable for U.S. federal income tax purposes.

Tax Basis in the Subscription Rights

A holder’s tax basis in its subscription rights will depend on the relative fair market value of the subscription rights received by such holder and the common stock owned by such holder at the time the subscription rights are distributed. If either (i) the fair market value of the subscription rights on the date such subscription rights are distributed is equal to at least 15% of the fair market value on such date of the common stock with respect to which the subscription rights are received or (ii) the holder elects, in its U.S. federal income tax return for the taxable year in which the subscription rights are received, to allocate part of its tax basis in such common stock to the subscription rights, then upon exercise of the subscription rights, the holder’s tax basis in the common stock will be allocated between the common stock and the subscription rights in proportion to their respective fair market values on the date the subscription rights are distributed. If the subscription rights received by a holder have a fair market value that is less than 15% of the fair market value of the common stock owned by such holder at the time the subscription rights are distributed, the holder’s tax basis in its subscription rights will be zero unless the holder elects to allocate its adjusted tax basis in the common stock owned by such holder in the manner described in the previous sentence. The fair market value of the subscription rights on the date the subscription rights are received is uncertain, and we have not obtained, and do not intend to obtain, an appraisal of the fair market value of the subscription rights as of that date. Fair market value is defined generally as the price at which property would hypothetically change hands between a willing buyer and a willing seller, where neither is under any compulsion to buy or sell. Fair market value is a factual determination.

Expiration of Subscription Rights

A holder that allows the subscription rights received in the rights offering to expire will not recognize any gain or loss, and the tax basis in the common stock owned by such holder with respect to which such subscription rights were distributed will be equal to the tax basis in such common stock immediately before the receipt of the subscription rights in the rights offering.

Exercise of Subscription Rights

A holder will not recognize any gain or loss upon the exercise of the subscription rights received in the rights offering. The tax basis in the common stock acquired through exercise of the subscription rights will equal the sum of the subscription price for the common stock and the holder’s tax basis, if any, in the rights as described above. The holding period for the common stock acquired through exercise of the subscription rights will begin on the date the subscription rights are exercised. Holders who exercise subscription rights after disposing of all of the shares of the common stock owned by such holder should consult with their tax advisor regarding the allocation of tax basis.

Expiration of Subscription Rights

A holder that allows the subscription rights received in the rights offering to expire will not recognize any gain or loss, and the tax basis in the common stock owned by such holder with respect to which such subscription rights were distributed will be equal to the tax basis in such common stock immediately before the receipt of the subscription rights in the rights offering.

U.S. Federal Income Tax Considerations Applicable to the Warrants

Sale or Other Taxable Disposition of Warrants

Upon the sale, exchange or other taxable disposition of a warrant received upon exercise of the subscription rights, including if we redeem the warrants at a price of \$0.01 per warrant, in general, a holder will recognize taxable gain or loss measured by the difference, if any, between (i) the amount of cash and the fair market value of any property received upon such taxable disposition, and (ii) such holder's adjusted tax basis in the warrant as allocated pursuant to the rules discussed above. Such gain or loss generally will be capital gain or loss and generally will be long-term capital gain or loss if, at the time of the sale or other disposition, a holder's holding period for the warrant is more than one year. The deductibility of capital losses is subject to limitations.

Exercise of Warrants

Upon the exercise of a warrant for cash, in general, holders will not recognize gain or loss for U.S. federal income tax purposes. A holder's initial tax basis in common stock received will equal such holder's adjusted tax basis in the warrant exercised. A holder's holding period for the shares of our common stock received on exercise generally will commence on the day of exercise.

Expiration of Warrants

A holder who allows a warrant to expire will generally recognize a loss for U.S. federal income tax purposes equal to the adjusted tax basis of the warrant. In general, such a loss will be a capital loss, and will be a short-term or long-term capital loss depending on the holder's holding period for the warrant.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of warrant shares that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to holders if, and to the extent that, such adjustment has the effect of increasing the holder's proportionate interest in our earnings and profits or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our stockholders). Adjustments to the exercise price of warrants made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. See the more detailed discussion of the rules applicable to distributions made by us under the heading "Taxation of Common Shares – Distributions" below.

U.S. Federal Income Tax Considerations Applicable to Our Common Shares

Distributions

Distributions with respect to shares of our common stock acquired upon exercise of subscription rights or upon exercise of warrants will be taxable as dividend income when actually or constructively received to the extent of our current or accumulated earnings and profits as determined for U.S. federal income tax purpose.

Dividend income received by certain non-corporate holders with respect to shares of our common stock generally will be "qualified dividends" subject to preferential rates of U.S. federal income tax, provided that the holder meets applicable holding period and other requirements. Subject to similar exceptions for short-term and hedged positions, dividend income on our shares of common stock paid to holders that are domestic corporations generally will qualify for the dividends-received deduction. To the extent that the amount of a distribution exceeds our current and accumulated earnings and profits, such distribution will be treated first as a tax-free return of capital to the extent of your adjusted tax basis in such shares of our common stock and thereafter as capital gain.

Dispositions

A holder that sells or otherwise disposes of shares of common stock acquired upon exercise of subscription rights or upon exercise of warrants in a taxable transaction will generally recognize capital gain or loss equal to the difference between the amount realized and such holder's adjusted tax basis in the shares. Such capital gain or loss will be long-term capital gain or loss if a holder's holding period for such shares is more than one year at the time of disposition. Long-term capital gain of a non-corporate holder is generally taxed at preferential rates. The deductibility of capital losses is subject to limitations.

Information Reporting and Backup Withholding

U.S. backup withholding (currently at a rate of 24%) is imposed upon certain distributions (or deemed distributions) to persons who fail (or are unable) to furnish the information required pursuant to U.S. information reporting requirements. Distributions (or deemed distributions or similar transactions) to a holder will generally be exempt from backup withholding, provided the holder meets applicable certification requirements, including (i) providing us with such holder's U.S. taxpayer identification number (*e.g.*, an individual's social security number or individual taxpayer identification number, or an entity's employer identification number, each a "TIN") or (ii) otherwise establishing an exemption (*e.g.*, an exemption from backup withholding as a corporate payee), in each instance on a properly filled out IRS Form W-9, certifying under penalties of perjury that, among others, such TIN or exemption is correct, together with such other certifications as may be required by law.

Backup withholding does not represent an additional tax. Any amounts withheld from a payment to a holder under the backup withholding rules will generally be allowed as a credit against such holder's U.S. federal income tax liability, and may entitle such holder to a refund, provided the required information and returns are timely furnished by such holder to the IRS.

AS INDICATED ABOVE, THE FOREGOING DISCUSSION IS FOR GENERAL INFORMATION PURPOSES ONLY AND SHOULD NOT BE VIEWED AS COMPLETE OR COMPREHENSIVE TAX ADVICE. HOLDERS RECEIVING A DISTRIBUTION OF STOCK RIGHTS CONTEMPLATED IN THIS RIGHTS OFFERING AND HOLDERS CONSIDERING THE PURCHASE OF OUR COMMON STOCK AND WARRANTS BY EXERCISING SUCH STOCK RIGHTS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE APPLICABILITY AND EFFECT OF STATE, LOCAL AND NON-U.S. LAWS TO THEM.

PLAN OF DISTRIBUTION

We are distributing rights certificates and copies of this prospectus to those persons who were holders of our common stock on May 14, 2020, the record date for the rights offering, promptly following the effective date of the registration statement of which this prospectus forms a part. We have not employed any brokers, dealers or underwriters in connection with the solicitation or exercise of rights in the rights offering and no commissions, fees or discounts will be paid in connection with the rights offering. While certain of our directors, officers and other employees may solicit responses from you, those directors, officers and other employees will not receive any commissions or compensation for their services other than their normal compensation, and will not register with the SEC as brokers in reliance on certain safe harbor provisions contained in Rule 3a4-1 under the Exchange Act.

Delivery of Subscription Rights

As soon as practicable after the record date for the rights offering, we will distribute the rights, rights certificates and copies of this prospectus to individuals who owned shares of common stock on 5:00 p.m., Eastern Time, on May 14, 2020. If your shares are held in the name of a custodian bank, broker, dealer or other nominee, then you should send your subscription documents and subscription payment to that record holder. If you are the record holder, then you should send your subscription documents, rights certificate, and subscription payment to the subscription agent, Broadridge Corporate Issuer Solutions, Inc., at the following address. If sent by mail, we recommend that you send documents and payments by registered mail, properly insured, with return receipt requested, and that a sufficient number of days be allowed to ensure delivery to the subscription agent. Do not send or deliver these materials to the Company.

By Mail:

*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718*

By Overnight Delivery:

*Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS IWS
51 Mercedes Way
Edgewood, NY 11717*

In the event that the rights offering is not fully subscribed, holders of rights who exercise all of their rights pursuant to their basic subscription right will have the opportunity to subscribe for additional Units pursuant to the over-subscription right. See further the section titled “The Rights Offering” beginning on page [35](#).

We have not agreed to enter into any standby or other arrangement to purchase or sell any rights or any of our securities. Robert W. Duggan has indicated that he intends to exercise all of his basic subscription rights and any over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability, but has not made any formal binding commitment to do so.

We have not entered into any agreements regarding stabilization activities with respect to our securities. If you have any questions, you should contact the information agent at Broadridge Corporate Issuer Solutions, Inc., Attn: BCIS Re-Reorganization Dept., P.O. Box 1317, Brentwood, NY 11717-0718, by telephone at 1-888-789-8409 or by email at shareholder@broadridge.com. We have agreed to pay Broadridge Corporate Issuer Solutions, Inc. a fee plus certain expenses, which we estimate will total approximately \$14,500. We estimate that our total expenses in connection with the rights offering will be approximately \$505,000.

Other than as described herein, we do not know of any existing agreements between any stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of Units or the shares of common stock and warrants comprising the Units.

LEGAL MATTERS

The validity of the rights and shares of common stock offered by this prospectus have been passed upon for us by Wilson Sonsini Goodrich & Rosati, P.C., Palo Alto, California.

EXPERTS

The financial statements as of December 31, 2019 and 2018, and for each of the two years in the period ended December 31, 2019, incorporated by reference in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated by reference herein, (which report expresses an unqualified opinion on the financial statements and includes explanatory paragraphs referring to substantial doubt about the Company's ability to continue as a going concern and the Company's change in its method of accounting for leases in 2019 due to the adoption of Accounting Standards Update No. 2016-02, *Leases (Topic 842)*). Such financial statements have been incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

Gumbiner Savett Inc., who was our independent registered public accounting firm until April 6, 2018, has audited our consolidated financial statements for the fiscal year ended December 31, 2017 which are included in our Annual Report on Form 10-K for the year ended December 31, 2019. Our financial statements are incorporated by reference in reliance on Gumbiner Savett Inc.'s reports, given on their authority as experts in accounting and auditing.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus. We incorporate by reference the documents listed below that we have previously filed with the SEC (excluding any portions of any Form 8-K that are not deemed "filed" pursuant to the General Instructions of Form 8-K):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed on [March 16, 2020](#), as amended by our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2019, filed on [March 30, 2020](#);
- our Current Reports on Form 8-K filed with the SEC on [February 14, 2020](#) and [April 6, 2020](#) (in each case, not including any information furnished under Items 2.02 or 7.01 of Form 8-K, including the related exhibits, which information is not incorporated by reference herein); and
- the description of our common stock contained in the Registration Statement on [Form 8-A](#) relating thereto, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information deemed furnished and not filed with the SEC. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

This prospectus may contain information that updates, modifies or is contrary to information in one or more of the documents incorporated by reference in this prospectus. You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, at no cost to the requester, a copy of any and all of the information that is incorporated by reference in this prospectus.

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Requests for such documents should be directed to:

Pulse Biosciences, Inc.
3957 Point Eden Way
Hayward, CA 94545
Attention: Chief Financial Officer

You may also access certain of the documents incorporated by reference in this prospectus through our website at www.pulsebiosciences.com. Except for the specific incorporated documents listed above, no information available on, or that can be accessed through, our website shall be deemed to be incorporated by reference into this prospectus or the registration statement of which it forms a part.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

We have filed with the SEC a registration statement under the Securities Act of 1933 (the "Securities Act") relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement, at prescribed rates, from the SEC at the address listed above. The registration statement and the documents referred to below under "Information Incorporated by Reference" are also available on our website, www.pulsebiosciences.com. We have not incorporated by reference into this prospectus the information on, or that can be accessed through, our website, and it is not a part of this prospectus, and the inclusion of our website address is an inactive textual reference only.



PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses Of Issuance And Distribution.**

The following table sets forth the costs and expenses payable by the registrant in connection with the sale of the securities being registered. All of the amounts shown are estimates except the SEC registration fee.

SEC Registration Fee	\$ 5,062
Subscription, Information and Warrant Agent Fees and Expenses	14,500
Legal Fees and Expenses	375,000
Accounting Fees and Expenses	55,000
Printing and Mailing Expenses	45,000
Miscellaneous Expenses	<u>10,438</u>
Total	<u>\$505,000</u>

Item 15. 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 of 1933, as amended (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.

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Item 16. Exhibits.

The following exhibits are filed herewith or incorporated by reference herein:

Exhibit Number	Exhibit Description	Form	Incorporation by Reference		
			File No.	Exhibit(s)	Filing Date
2.1	Plan of Conversion of Pulse Biosciences, Inc.	8-K12B	001-37744	2.1	June 18, 2018
3.1	Articles of Conversion	8-K12B	001-37744	3.1	June 18, 2018
3.2	Certificate of Conversion	8-K12B	001-37744	3.2	June 18, 2018
3.3	Certificate of Incorporation of Pulse Biosciences, Inc.	8-K12B	001-37744	3.3	June 18, 2018
3.4	Bylaws of Pulse Biosciences, Inc.	8-K12B	001-37744	3.4	June 18, 2018
4.1	Specimen Common Stock Certificate	8-K12B	001-37744	4.1	June 18, 2018
4.2*	Form of Non-Transferable Subscription Rights Certificate				
4.3*	Form of Warrant				
4.4*	Form of Warrant Agency Agreement between Pulse Biosciences, Inc. and Broadridge Corporate Issuer Solutions, Inc.				
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, P.C.				
23.1*	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm				
23.2*	Consent of Deloitte and Touche LLP, Independent Registered Public Accounting Firm				
23.3*	Consent of Wilson Sonsini Goodrich & Rosati, P.C. (contained in Exhibit 5.1 to the original filing of this registration statement)				
24.1	Powers of Attorney (included on the signature page to the original filing of this registration statement)	S-3	333-237577	24.1	April 6, 2020
99.1*	Form of Instruction for Use of Pulse Biosciences, Inc.'s Non-Transferable Subscription Rights Certificates				
99.2*	Form of Letter to Stockholders Who are Record Holders				
99.3*	Form of Letter to Brokers and Other Nominee Holders				
99.4*	Form of Letter to Clients of Brokers and Other Nominee Holders				
99.5*	Form of Nominee Holder Certification				
99.6*	Form of Beneficial Owner Election				

* Filed herewith

Item 17. 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 SEC 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), (a)(1)(ii) and (a)(1)(iii) of this section 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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the 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.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) If the registrant is relying on Rule 430B,

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

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(ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer and sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(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) The undersigned registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Exchange Act; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(d) 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 SEC 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.

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(e) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus 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.

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-3 and has duly caused this Registration Statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hayward, California, on May 1, 2020.

PULSE BIOSCIENCES, INC.

By: /s/ Darrin R. Uecker

Darrin R. Uecker
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933 this registration statement has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Darrin R. Uecker</u> Darrin R. Uecker	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	May 1, 2020
<u>/s/ Sandra A. Gardiner</u> Sandra A. Gardiner	Chief Financial Officer, Executive Vice President of Finance and Administration, Secretary and Treasurer <i>(Principal Financial and Accounting Officer)</i>	May 1, 2020
<u>*</u> Robert W. Duggan	Chairman of the Board of Directors	May 1, 2020
<u>*</u> Kenneth A. Clark	Director	May 1, 2020
<u>*</u> Mitchell E. Levinson	Director	May 1, 2020
<u>*</u> Manmeet S. Soni	Director	May 1, 2020
<u>*</u> Mahkam Zanganeh	Director	May 1, 2020
<u>*By: /s/ Sandra A Gardiner</u> Sandra A. Gardiner Attorney-in-fact		

THE TERMS AND CONDITIONS OF THE RIGHTS OFFERING ARE SET FORTH IN THE COMPANY'S PROSPECTUS DATED [•], 2020 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM BROADRIDGE CORPORATE ISSUER SOLUTIONS, INC., THE SUBSCRIPTION AGENT, BY CALLING (888) 789-8409.

PULSE BIOSCIENCES, INC.

Incorporated under the laws of the State of Delaware

NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATE

Evidencing Non-Transferable Subscription Rights to Purchase Units of Pulse Biosciences, Inc.

Subscription Price: To be determined as set forth below

THE SUBSCRIPTION RIGHTS WILL EXPIRE IF NOT EXERCISED ON OR BEFORE
5:00 P.M., EASTERN TIME, ON JUNE 8, 2020 (THE "EXPIRATION DATE")

REGISTERED OWNER:

THIS CERTIFIES THAT the registered owner whose name is inscribed hereon is the owner of the number of non-transferable subscription rights ("Rights") set forth above. The Rights entitle the holder thereof to subscribe for and purchase units of Pulse Biosciences, Inc., a Delaware corporation (the "Company"), each unit consisting of one share of common stock, par value \$0.001 per share (the "Common Stock") and 0.15 warrants to purchase shares of Common Stock (the "Units", and each, a "Unit"), at a subscription price per full Unit equal to the lesser of (i) \$7.01 (the "Initial Price") and (ii) the volume weighted average price of the Common Stock for the five trading day period through and including the Expiration Date (the "Alternate Price"), pursuant to a rights offering (the "Rights Offering"), on the terms and subject to the conditions set forth in the Prospectus.

Each Right includes a subscription right. Under the subscription right, for each share of common stock owned as of the record date of the Rights Offering, the holder hereof is entitled to purchase [•] Units at the Initial Price per full Unit.

The Rights represented by this Subscription Rights Certificate may be exercised by completing Form 1 and any other appropriate forms on the reverse side hereof and by returning the full payment of the subscription price for each Unit in accordance with the instructions contained herein. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid will be put towards the purchase of additional Units (either towards basic subscription rights, if available, or towards the over-subscription right if the basic subscription rights have already been exercised in full).

This Non-Transferable Subscription Rights Certificate is not valid unless countersigned by Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent. Witness the seal of Pulse Biosciences, Inc. and the signatures of its duly authorized officers.

DATED: [•], 2020

President and Chief Executive Officer

Secretary

DELIVERY OPTIONS FOR NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATE

Deliver other than in the manner or to the addresses listed below will not constitute valid delivery.

If delivering by hand or overnight courier:

If delivering by first class mail:

Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS IWS
51 Mercedes Way
Edgewood, NY 11717

Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718

SECTION 1 – EXERCISE OF SUBSCRIPTION RIGHTS

To subscribe for Units pursuant to your subscription right, please complete lines (a) and (b) and sign in part (c). If you do not indicate the number of Rights being exercised, or if you do not forward the full subscription payment for the number of Rights that you indicate are being exercised, then you will be deemed to have exercised the maximum number of Rights that may be exercised with the aggregate subscription payment you delivered to the Subscription Agent. Fractional Units resulting from the exercise of the subscription rights will be eliminated by rounding down to the nearest whole number, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the Subscription Agent will be returned, without interest, as soon as practicable. The common stock and warrants comprising the Units will separate upon the closing of the rights offering and will be issued separately, however, they may only be purchased as a Unit and the Unit will not trade as a separate security. Each warrant will be exercisable for one share of Common Stock at an exercise price equivalent to the subscription price through its expiration five years from the date of issuance. The number of warrants issued to you will be calculated by rounding down to the nearest whole number the product computed by multiplying the number of Units you subscribe for by a factor of 0.15. Accordingly, if you purchase fewer than seven Units, you will not receive any warrants.

(a) EXERCISE OF SUBSCRIPTION RIGHT:

(i) Basic Subscription Rights:

I exercise	_____	x	[•]	=	_____	x	\$7.01	=	\$ _____
	(No. of shares owned)		x (Initial ratio)		(No. of Basic Subscription Units Subscribed For)		x (Initial Price)		(Amount Enclosed)

(ii) Over-Subscription Right: If you fully exercise your Basic Subscription Right, above, and wish to subscribe for additional shares, you may exercise your Over-Subscription Right below.

I exercise	_____	x	\$7.01	=	\$ _____
	(No. of Over- Subscription Units Subscribed For)		x (Initial Price)		(Amount Enclosed)

(b) PAYMENT:

	Amount Enclosed	
Basic Subscription Right:	\$ _____	<input type="checkbox"/> Check or bank draft drawn on a U.S. bank, or postal or express money order payable to Broadridge Corporate Issuer Solutions, Inc., as Subscription Agent.
Over-Subscription Right:	\$ _____	<input type="checkbox"/> Wire transfer directly to the escrow account maintained by Broadridge Corporate Issuer Solutions, Inc., as Subscription Agent.
Total Amount Enclosed:	\$ _____	

Method of Payment: All payments must be made in U.S. dollars by wire transfer of funds, U.S. Postal money order or cashier's, certified, or uncertified check drawn upon a U.S. bank payable to "Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences Inc.)." The Subscription Agent will not accept payment by any other means.

(c) SIGNATURE(S):

TO SUBSCRIBE: I acknowledge that I have received the Prospectus for the rights offering and I hereby irrevocably subscribe for the number of Units indicated above on the terms and conditions specified in the Prospectus. I hereby agree that if I fail to pay for the Units for which I have subscribed, Pulse Biosciences, Inc. may exercise its legal remedies against me.

This form must be signed by the registered holder(s) exactly as their name(s) appear(s) on the certificate(s) or book entry or by person(s) authorized to sign on behalf of the registered holder(s) by documents transmitted herewith.

Signature(s) of Subscriber(s) Date Daytime Telephone Number(s)

If signature is by trustee(s), executor(s), administrator(s), guardian(s), attorney(s)-in-fact, agent(s), officer(s) of a corporation or another acting in a fiduciary or representative capacity, please provide the following information (please print). See the instructions.

Name(s) Full Title Taxpayer ID # or Social Security # Date

SECTION 2 – SPECIAL ISSUANCE OR DELIVERY INSTRUCTIONS FOR SUBSCRIPTION RIGHTS HOLDERS

(a) To be completed ONLY if the book-entry representing the Common Stock is to be issued in a name other than that of the registered holder. (See the Instructions.)

DO NOT FORGET TO COMPLETE THE GUARANTEE OF SIGNATURE(S) SECTION BELOW.

Print Full Name: _____

Print Full Address: _____

Taxpayer ID # or Social Security #: _____

(b) To be completed ONLY if the book-entry representing the Common Stock is to be issued to an address other than that shown on the front of this certificate. (See the Instructions.)

DO NOT FORGET TO COMPLETE THE GUARANTEE OF SIGNATURE(S) SECTION BELOW.

Print Full Name: _____

Print Full Address: _____

Taxpayer ID # or Social Security #: _____

SIGNATURE GUARANTEE

This must be completed if you have completed any portion of Section 2.

Signature Guaranteed: _____
(Name of Bank or Form)

By: _____
(Signature of Officer)

IMPORTANT: The signature(s) should be guaranteed by an eligible guarantor institution (bank, stock broker, savings & loan association or credit union) with membership in an approved signature guarantee medallion program pursuant to Securities and Exchange Commission Rule 17Ad-15.

FOR INSTRUCTIONS ON THE USE OF NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATES, CONSULT BROADRIDGE CORPORATE ISSUER SOLUTIONS, INC., THE SUBSCRIPTION AGENT, AT (888)-789-8409 (TOLL-FREE). THE RIGHTS OFFERING EXPIRES AT 5:00 P.M., EASTERN TIME, ON JUNE 8, 2020, AND THIS NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATE IS VOID THEREAFTER.

THE RIGHTS OFFERING HAS BEEN REGISTERED OR QUALIFIED OR IS BELIEVED TO BE EXEMPT FROM REGISTRATION OR QUALIFICATION ONLY UNDER THE FEDERAL LAWS OF THE UNITED STATES AND THE LAWS OF THE STATES IN THE UNITED STATES. RESIDENTS OF OTHER JURISDICTIONS MAY NOT PURCHASE THE SECURITIES OFFERED HEREBY UNLESS THEY CERTIFY THAT THEIR PURCHASES OF SUCH SECURITIES ARE EFFECTED IN ACCORDANCE WITH THE APPLICABLE LAWS OF SUCH JURISDICTIONS.

PULSE BIOSCIENCES, INC.

WARRANT TO PURCHASE COMMON STOCK

Warrant Shares: _____

Initial Exercise Date: _____, 2020

THIS WARRANT TO PURCHASE COMMON STOCK (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and on or prior to 5:00 p.m. (Eastern Time) on _____¹ (the "Termination Date") but not thereafter, to subscribe for and purchase from Pulse Biosciences, Inc., a Delaware corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant shall initially be issued and maintained in the form of a security held in book-entry form and the Depository Trust Company or its nominee ("DTC") shall initially be the sole registered holder of this Warrant, subject to a Holder's right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply. This Warrant is being issued in connection with the Company's rights offering pursuant to its Registration Statement on Form S-3, as amended (File No. 333-237577).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Board of Directors" means the board of directors of the Company and any authorized committee thereof.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Stock Equivalents" means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Registration Statement" means the Company's Registration Statement on Form S-3, as amended (File No. 333-237577).

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Trading Day" means a day on which the Common Stock is traded on a Trading Market.

¹ Insert the date that is the five year anniversary of the Initial Exercise Date.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Broadridge Corporate Issuer Solutions, Inc., the current transfer agent of the Company, with a mailing address of Broadridge Corporate Issuer Solutions, Inc. Attn: BCIS Re-Organization Dept., P.O. Box 1317, Brentwood, NY 11717-0718 and a telephone number of 1-888-789-8409, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (Eastern time) to 4:02 p.m. (Eastern time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrant Agency Agreement” means that certain warrant agency agreement, dated on or about the Initial Exercise Date, between the Company and the Warrant Agent.

“Warrant Agent” means the Transfer Agent and any successor warrant agent of the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

- a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before 5:00 p.m. (Eastern time) on the Termination Date by delivery to the Company or the Warrant Agent at its corporate trust department (i) the warrant certificate evidencing the Warrants to be exercised (the “Warrant Certificate”), or, in the case of warrants represented by one or more book-entry certificates (each, a “Book-Entry Warrant Certificate”), the Warrants to be exercised (the “Book-Entry Warrants”) shown on the records of the DTC to an account of the Warrant Agent at the DTC designated for such purpose in writing by the Warrant Agent to the DTC from time to time, (ii) a facsimile copy or PDF copy submitted by e-mail of the election to purchase the Warrant Shares underlying the Warrants to be exercised (the “Notice of Exercise”), properly completed and executed by the registered holder on the reverse of the Warrant Certificate or, in the case of a Book-Entry Warrant Certificate, properly delivered by the institution that has an account with the DTC (such institution, with respect to a Warrant in its account, a “Participant”) in accordance with the DTC’s procedures, and (iii) the Exercise Price for each Warrant to be exercised in lawful money of the United States of America by certified or official bank check or by bank wire transfer in immediately available funds.

If any of (A) the Warrant Certificate or the Book-Entry Warrants, (B) the Notice of Exercise, or (C) the Exercise Price therefor, is received by the Warrant Agent after 5:00 p.m., Eastern time, on the specified Exercise Date, the Warrants will be deemed to be received and exercised on the business day next succeeding the Exercise Date. If the date specified as the Exercise Date is not a business day, the Warrants will be deemed to be received and exercised on the next succeeding day that is a business day. If the Warrants are received or deemed to be received after the Expiration Date, the exercise thereof will be null and void and any funds delivered to the Warrant Agent will be returned to the Holder or Participant, as the case may be, as soon as practicable. In no event will interest accrue on funds deposited with the Warrant Agent in respect of an exercise or attempted exercise of Warrants. The validity of any exercise of Warrants

will be determined by the Company in its sole discretion and such determination will be final and binding upon the registered holder or Participant, as applicable, and the Warrant Agent. Neither the Company nor the Warrant Agent shall have any obligation to inform a registered holder or the Participant, as applicable, of the invalidity of any exercise of Warrants.

The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

There is no “cashless” exercise provision for this Warrant.

- b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall \$_____, subject to adjustment hereunder (the “Exercise Price”).
- c) Mechanics of Exercise.
 - i. Delivery of Warrant Shares Upon Exercise. The Warrant Agent shall, by 11:00 a.m. Eastern time on the Business Day following the Exercise Date of any Warrant, advise the Company or the transfer agent and registrar in respect of (a) the Warrant Shares issuable upon such exercise as to the number of Warrants exercised, (b) the instructions of each Holder or Participant, as the case may be, with respect to delivery of the Warrant Shares issuable upon such exercise, and the delivery of definitive Warrant Certificates, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise, (c) in case of a Book-Entry Warrant Certificate, the notation that shall be made to the records maintained by the DTC, its nominee for each Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise and (d) such other information as the Company or such transfer agent and registrar shall reasonably require.

The Company shall, by 5:00 p.m. Eastern time, on the third Business Day next succeeding the Exercise Date of any Warrant and the clearance of the funds in payment of the Exercise Price, execute, issue and deliver to the Warrant Agent, the Warrant Shares to which such registered holder or Participant, as the case may be, is entitled, in fully registered form, registered in such name or names as may be directed by such registered holder or the Participant, as the case may be. Upon receipt of such Warrant Shares, the Warrant Agent shall, by 5:00 p.m., Eastern time, on the fifth Business Day next succeeding such Exercise Date, transmit such Warrant Shares to or upon the order of the registered holder or Participant, as the case may be.

In lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company’s transfer agent is participating in the DTC’s Fast Automated Securities Transfer (FAST) program, the Company shall use its reasonable best efforts to cause its transfer agent to electronically transmit the Warrant Shares issuable upon exercise to the DTC by crediting the account of the DTC or of the Participant through its Deposit or Withdrawal at Custodian (DWAC) system. The time periods for delivery described in the immediately preceding paragraph shall apply to the electronic transmittals described herein.

Each person in whose name any such certificate for shares of Common Stock is issued shall for all purposes be deemed to have become the holder of record of such shares on the date on which the Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery of such certificate, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

- ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

- iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(c)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.
 - iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(c)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.
 - v. No Fractional Shares or Scrip. Warrants may be exercised only in whole numbers of Warrant Shares. No fractional Warrant Shares are to be issued upon the exercise of the Warrant, but rather the number of Warrant Shares to be issued shall be rounded down to the nearest whole number. If fewer than all of the Warrants evidenced by a Warrant Certificate are exercised, a new Warrant Certificate for the number of unexercised Warrants remaining shall be executed by the Company and countersigned by the Warrant Agent, and delivered to the Holder at the address specified on the books of the Warrant Agent or as otherwise specified by such Holder.
 - vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.
 - vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.
- (d) Right of Redemption. Subject to this Section 2(d), if, at least six months after the Initial Exercise Date the VWAP exceeds \$[____]² (subject to adjustment) per share for ten (10) consecutive trading days, then the

² 200% of the Exercise Price.

Company may redeem not less than all of the outstanding Warrants for which a Notice of Exercise has not yet been delivered (such right, a "Redemption Right") for consideration equal to \$0.01 per Warrant (subject to adjustment for forward and reverse stock splits, recapitalizations, stock dividends and the like after the Initial Exercise Date, the "Redemption Price"). The Company shall be required to exercise its Redemption Right with respect to all of the other Warrants issued by the Company pursuant to the Registration Statement. To exercise the Redemption Right, the Company must deliver to all of the Holders an irrevocable written notice (a "Redemption Notice") indicating therein the Company's election to redeem all of the Warrants and setting forth a date for the redemption of such Warrants, which date shall be at least thirty (30) days after the date of the Redemption Notice (the "Redemption Date"). The Redemption Notice shall be mailed by first class mail, postage prepaid, by the Company to the Holders of the Warrants at their last addresses as they shall appear on the Warrant Register. Any Redemption Notice mailed in the manner herein provided shall be conclusively presumed to have been duly given on the date sent whether or not the Holder received such notice. The Warrants may be exercised for cash in accordance with the terms therein at any time after the Redemption Notice shall have been given by the Company pursuant to this Section 2(d) hereof and prior to the Redemption Date. In furtherance thereof, the Company covenants and agrees that it will honor all Notices of Exercise with respect to Warrant Shares subject to a Redemption Notice that are tendered through 6:30 p.m. (Eastern time) on the Redemption Date. Following the Redemption Date, the Holders of the Warrants shall have no further rights except to receive the Redemption Price upon surrender of the Warrants.

Section 3. Certain Adjustments.

- a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.
- b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.
- c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the

number of shares of Common Stock acquirable upon complete exercise of this Warrant immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

- d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder, the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction. For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall have the same rights as the holders of Common Stock as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction other than one in which a Successor Entity (as defined below) that is a publicly traded corporation whose stock is quoted or listed on a Trading Market assumes this Warrant such that the Warrant shall be exercisable for the publicly traded common stock of such Successor Entity and only if such Fundamental Transaction is within the Company's control and the consideration is in all stock in the Successor Entity, the Company or any Successor Entity (as defined below), at the Holder's option, shall purchase this Warrant from the Holder by paying to the Holder, at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), an amount, in the same type or form of consideration (and in the same proportion) that is being paid to the holders of Common Stock in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock, or any combination thereof, or whether holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction, equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction. If the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall have the option to require the Company or any Successor Entity to purchase its Warrant for the Black Scholes Value of the unexercised portion of this Warrant as of the date of consummation of such Fundamental Transaction, provided, however, that the Company may elect that the consideration for such purchase be (i) in the form of Common Stock of the Company valued at the Black Scholes Value delivered to the Holder immediately prior to the

- consummation of such Fundamental Transaction such that the Holder will be able to receive the same type of consideration described in clause (ii) of this proviso in the Fundamental Transaction or (ii) in using the same type or form of consideration (and in the same proportion) that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black and Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, L.P. (“Bloomberg”) determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date. The payment of the Black Scholes Value, if to be paid in cash, will be made by wire transfer of immediately available funds within five Business Days of the Holder’s election (or, if later, on the effective date of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. For the avoidance of doubt, if, at any time while this Warrant is outstanding, a Fundamental Transaction occurs, pursuant to the terms of this Section 3(d), the Holder shall not be entitled to receive more than one of (i) the consideration receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction, (ii) an amount of cash equal to the Black Scholes Value of the remaining unexercised portion of this Warrant as calculated pursuant this Section, or (iii) the assumption by the Successor Entity of all of the obligations of the Company under this Warrant and the other Transaction Documents and the option to receive a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant.
- e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.
- f) Notice to Holder.
- i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of

this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

- ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

- a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.
- b) New Warrants. If this Warrant is not held in global form through DTC (or any successor depository), this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute

and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

- c) Warrant Register. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the “Warrant Register”), in the name of the record Holder hereof from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

- a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3.
- b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it that any Warrant is lost, stolen, mutilated, or destroyed, the Company and the Warrant Agent may on such terms as to indemnity (including obtaining an open penalty bond protecting the Warrant Agent) or otherwise as they may in their discretion impose (which shall, in the case of a mutilated Warrant, include the surrender thereof), issue a new Warrant of like denomination, tenor, and date as the Warrant so lost, stolen, mutilated, or destroyed. Any such new Warrant shall constitute a substitute contractual obligation of the Company, whether or not the allegedly lost, stolen, mutilated, or destroyed Warrant shall be at any time enforceable by anyone.
- c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.
- d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

- e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.
- f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, will have restrictions upon resale imposed by state and federal securities laws.
- g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.
- h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at 3957 Point Eden Way, Hayward, California 94545, Attention: Sandra A. Gardiner, facsimile number: _____, email address: _____ or to any such address the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (Eastern time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (Eastern time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service,

or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

- i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.
- j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.
- k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.
- l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder or the beneficial owner of this Warrant, on the other hand.
- m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.
- n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.
- o) Warrant Agency Agreement. If this Warrant is held in global form through DTC (or any successor depository), this Warrant is issued subject to the Warrant Agency Agreement. To the extent any provision of this Warrant conflicts with the express provisions of the Warrant Agency Agreement, the provisions of this Warrant shall govern and be controlling.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

PULSE BIOSCIENCES, INC.

By: _____

Sandra A. Gardiner

Chief Financial Officer, Executive Vice
President of Finance and Administration,
Secretary and Treasurer

NOTICE OF EXERCISE

TO: PULSE BIOSCIENCES, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any. Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

(2) Payment shall take the form of lawful money of the United States (Cash Exercise).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to:

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated:

Holder's Signature:

Holder's Address:

WARRANT AGENCY AGREEMENT

WARRANT AGENCY AGREEMENT made as of [_____] (“Issuance Date”), between Pulse Biosciences, Inc., a Delaware corporation (“Company”), with offices at 3957 Point Eden Way, Hayward, California 94545, and Broadridge Corporate Issuer Solutions, Inc. (“Warrant Agent”), with offices at 51 Mercedes Way, Edgewood, NY 11717 (the “Warrant Agreement”).

WHEREAS, the Company is engaged in a public rights offering of Units and, in connection therewith, has determined to issue and deliver up to \$4,500,000 of Warrants (the “Warrants”) to certain investors who subscribe for Units in the rights offering, with each such Warrant evidencing the right of the holder thereof to purchase a share of the Company’s common stock, par value \$0.001 per share (the “Common Stock”, subject to adjustment as described herein); and

WHEREAS, the Company has filed with the Securities and Exchange Commission a Registration Statement, No. 333-237577 on Form S-3 (as the same may be amended from time to time, the “Registration Statement”) for the registration, under the Securities Act of 1933, as amended of, among other securities, the Warrants and the Common Stock issuable upon exercise of the Warrants (the “Warrant Shares”), and such Registration Statement was declared effective on [_____] , 2020; and

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in connection with the issuance, registration, transfer, exchange and exercise of the Warrants; and

WHEREAS, the Company desires to provide for the form and provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants, when executed on behalf of the Company and countersigned by or on behalf of the Warrant Agent, as provided herein, the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company for the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the terms and conditions set forth in this Warrant Agreement.

2. Warrants.

2.1. Form of Warrant. Each Warrant shall be issued in registered form only, shall be in the form of Exhibit A hereto, the provisions of which are incorporated herein, and shall be signed by, or bear the electronic signature of, the Chief Executive Officer, President, Chief Financial Officer or Treasurer, Secretary or Assistant Secretary of the Company. NOTWITHSTANDING ANYTHING TO THE CONTRARY PROVIDED HEREIN, THE PROVISIONS OF EXHIBIT A SHALL BE BINDING IN ALL RESPECTS ON EACH OF THE COMPANY AND THE WARRANT AGENT. TO THE EXTENT ANY TERM OR PROVISION HEREIN IS INCONSISTENT WITH EXHIBIT A, THE TERMS AND PROVISIONS OF EXHIBIT A SHALL CONTROL. CAPITALIZED TERMS USED BUT NOT DEFINED HEREIN SHALL HAVE THE MEANING ASCRIBED TO THEM IN EXHIBIT A. TO THE EXTENT ANY TERM OR PROVISION HEREIN IS INCONSISTENT WITH EXHIBIT A, THE TERMS AND PROVISIONS OF EXHIBIT A SHALL CONTROL. CAPITALIZED TERMS USED BUT NOT DEFINED HEREIN SHALL HAVE THE MEANING ASCRIBED TO THEM IN EXHIBIT A. In the event the person whose electronic signature has been placed upon any Warrant shall have ceased to serve in the capacity in which such person signed the Warrant before such Warrant is issued, it may be issued with the same effect as if he or she had not ceased to be such at the date of issuance. All of the Warrants shall initially be represented by one or more book-entry certificates (each a “Book-Entry Warrant Certificate”).

2.2. Effect of Countersignature. Unless and until countersigned by the Warrant Agent pursuant to this Warrant Agreement, a Warrant shall be invalid and of no effect and may not be exercised by the holder thereof.

2.3. Registration.

2.3.1. Warrant Register. The Warrant Agent shall maintain books (“Warrant Register”), for the registration of original issuance and the registration of transfer of the Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue and register the Warrants in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company. Because the Warrants are DTC eligible as of the Issuance Date, all of the Warrants shall be represented by one or more Book-Entry Warrant Certificates deposited with the Depository Trust Company (the “Depository”) and registered in the name of Cede & Co., a nominee of the Depository. Ownership of beneficial interests in the Book-Entry Warrant Certificates shall be shown on, and the transfer of such ownership shall be effected through, records maintained (i) by the Depository or its nominee for each Book-Entry Warrant Certificate; (ii) by institutions that have accounts with the Depository (such institution, with respect to a Warrant in its account, a “Participant”); or (iii) directly on the book-entry records of the Warrant Agent with respect only to owners of beneficial interests that represent such direct registration.

If the Depository subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding making other arrangements for book-entry settlement within ten (10) days after the Depository ceases to make its book-entry settlement available. In the event that the Company does not make alternative arrangements for book-entry settlement within ten (10) days or the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Warrant Agent shall provide written instructions to the Depository to deliver to the Warrant Agent for cancellation each Book-Entry Warrant Certificate, and the Company shall instruct the Warrant Agent to deliver to the Depository definitive Warrant Certificates in physical form evidencing such Warrants. Such definitive Warrant Certificates shall be in substantially the form annexed hereto as Exhibit A.

2.3.2. Beneficial Owner; Registered Holder. The term “beneficial owner” shall mean any person in whose name ownership of a beneficial interest in the Warrants evidenced by a Book-Entry Warrant Certificate is recorded in the records maintained by the Depository or its nominee. Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name such Warrant shall be registered upon the Warrant Register (“registered holder”), as the absolute owner of such Warrant and of each Warrant represented thereby (notwithstanding any notation of ownership or other writing on the Warrant Certificate made by anyone other than the Company or the Warrant Agent), for the purpose of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

2.4. Detachability of Warrants. The securities comprising the units will be issued separately and will be separately transferable immediately upon issuance.

2.5. Uncertificated Warrants. Notwithstanding the foregoing and anything else herein to the contrary, the Warrants may be issued in uncertificated form.

3. Terms and Exercise of Warrants.

3.1. Exercise Price. Each Warrant shall, when countersigned by the Warrant Agent, entitle the registered holder thereof, subject to the provisions of such Warrant and of this Warrant Agreement, to purchase from the Company the number of shares of Common Stock stated therein, subject to the subsequent adjustments as provided therein. The term “Exercise Price” as used in this Warrant Agreement refers to the price per share at which Common Stock may be purchased at the time a Warrant is exercised.

3.2. Duration of Warrants. A Warrant may be exercised only during the period (“Exercise Period”) stated therein (“Expiration Date”). Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at the close of business on the Expiration Date.

3.3. Exercise of Warrants.

3.3.1. Exercise and Payment. A registered holder may exercise a Warrant on the terms stated therein.

The Warrant Agent shall deposit all funds received by it in payment of the Exercise Price in the account of the Company maintained with the Warrant Agent for such purpose and shall advise the Company via telephone at the end of each day on which funds for the exercise of the Warrants are received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephonic advice to the Company in writing.

3.3.2. Issuance of Certificates. The Warrant Agent shall, by 11:00 A.M. New York time on the Business Day following the Exercise Date of any Warrant, advise the Company or the transfer agent and registrar in respect of (a) the Warrant Shares issuable upon such exercise as to the number of Warrants exercised in accordance with the terms and conditions of this Warrant Agreement, (b) the instructions of each registered holder or Participant, as the case may be, with respect to delivery of the Warrant Shares issuable upon such exercise, and the delivery of definitive Warrant Certificates, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise, (c) in case of a Book-Entry Warrant Certificate, the notation that shall be made to the records maintained by the Depository, its nominee for each Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance, if any, of the Warrants remaining after such exercise and (d) such other information as the Company or such transfer agent and registrar shall reasonably require.

The Company shall, by 5:00 P.M., New York time, on the third Business Day next succeeding the Exercise Date of any Warrant and the clearance of the funds in payment of the Exercise Price, execute, issue and deliver to the Warrant Agent, the Warrant Shares to which such registered holder or Participant, as the case may be, is entitled, in fully registered form, registered in such name or names as may be directed by such registered holder or the Participant, as the case may be. Upon receipt of such Warrant Shares, the Warrant Agent shall, by 5:00 P.M., New York time, on the fifth Business Day next succeeding such Exercise Date, transmit such Warrant Shares to or upon the order of the registered holder or Participant, as the case may be.

In lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company's transfer agent is participating in the Depository's Fast Automated Securities Transfer program, the Company shall use its reasonable best efforts to cause its transfer agent to electronically transmit the Warrant Shares issuable upon exercise to the Depository by crediting the account of the Depository or of the Participant through its Deposit or Withdrawal at Custodian (DWAC) system. The time periods for delivery described in the immediately preceding paragraph shall apply to the electronic transmittals described herein.

3.3.3. No Fractional Exercise. As set out in the Warrant, Warrants may be exercised only in whole numbers of Warrant Shares.

3.3.4. Date of Issuance. Each person in whose name any such certificate for shares of Common Stock is issued shall for all purposes be deemed to have become the holder of record of such shares on the date on which the Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery of such certificate, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

4. Adjustments.

4.1. Adjustment upon Subdivision or Combination of Common Stock. If an adjustment is made pursuant to Section 3 of the Warrant, Company shall promptly notify Warrant Agent of any such adjustment and give specific instructions to Warrant Agent with respect to any adjustments to the warrant register.

4.2. Reclassification, Consolidation, Purchase, Combination, Sale or Conveyance. Upon the occurrence of a Fundamental Transaction (as defined in the Warrant), the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant Agreement and the Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant Agreement and the Warrant with the same effect as if such Successor Entity had been named as the Company herein.

The Company shall instruct the Warrant Agent to mail by first class mail, postage prepaid, to each registered holder of a Warrant, written notice of the execution of any such amendment, supplement or agreement. Any supplemented or amended agreement entered into by the successor corporation or transferee shall provide for adjustments, which shall be as nearly equivalent as may be practicable to the adjustments provided for in the Warrant. The Warrant Agent shall be under no responsibility to determine the correctness of any provisions contained in such agreement relating either to the kind or amount of securities or other property receivable upon exercise of warrants or with respect to the method employed and provided therein for any adjustments and shall be entitled to rely upon the provisions contained in any such agreement. The provisions of this Section 4.2 shall similarly apply to successive reclassifications, changes, consolidations, mergers, sales and conveyances of the kind described above.

4.3. Notices of Changes in Warrant. Upon every adjustment of the Exercise Price or the number of shares issuable upon exercise of a Warrant, the Company shall give written notice to the Warrant Agent, which notice shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of shares purchasable at such price upon the exercise of a Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based.

4.4. Form of Warrant. The form of Warrant need not be changed because of any adjustment pursuant to this Section 4, and Warrants issued after such adjustment may state the same Exercise Price and the same number of shares as is stated in the Warrants initially issued pursuant to this Warrant Agreement. However, the Company may at any time in its sole discretion make any change in the form of Warrant that the Company may deem appropriate and that does not affect the substance thereof, and any Warrant thereafter issued or countersigned, whether in exchange or substitution for an outstanding Warrant or otherwise, may be in the form as so changed.

5. Transfer and Exchange of Warrants.

5.1. Registration of Transfer. The Warrant Agent shall register the transfer, from time to time, of any outstanding Warrant upon the Warrant Register, upon surrender of such Warrant for transfer, properly endorsed with signatures properly guaranteed and accompanied by appropriate instructions for transfer. Upon any such transfer, a new Warrant representing an equal aggregate number of Warrants shall be issued and the old Warrant shall be cancelled by the Warrant Agent. The Warrants so cancelled shall be delivered by the Warrant Agent to the Company from time to time upon request.

5.2. Procedure for Surrender of Warrants. Warrants may be surrendered to the Warrant Agent, together with a written request for exchange or transfer reasonably acceptable to Warrant Agent, duly executed by the registered holder thereof, or by a duly authorized attorney, and thereupon the Warrant Agent shall issue in exchange therefor one or more new Warrants as requested by the registered holder of the Warrants so surrendered, representing an equal aggregate number of Warrants; provided, however, that except as otherwise provided herein or in any Book-Entry Warrant Certificate, each Book-Entry Warrant Certificate may be transferred only in whole and only to the Depository, to another nominee of the Depository, to a successor depository, or to a nominee of a successor depository; provided further, however, that in the event that a Warrant surrendered for transfer bears a restrictive legend, the Warrant Agent shall not cancel such Warrant and issue new Warrants in exchange therefor until the Warrant Agent has received an opinion of counsel for the Company stating that such transfer may be made and indicating whether the new Warrants must also bear a restrictive legend. Upon any such registration of transfer, the Company shall execute, and the Warrant Agent shall countersign and deliver, in the name of the designated transferee a new Warrant Certificate or Warrant Certificates of any authorized denomination evidencing in the aggregate a like number of unexercised Warrants.

5.3. Service Charges. A service charge shall be made for any exchange or registration of transfer of Warrants, as negotiated between Company and Warrant Agent.

5.4. Warrant Execution and Countersignature. The Warrant Agent is hereby authorized to countersign and to deliver, in accordance with the terms of this Warrant Agreement, the Warrants required to be issued pursuant to the provisions of this Section 5, and the Company, whenever required by the Warrant Agent, will supply the Warrant Agent with Warrants duly executed on behalf of the Company for such purpose.

6. Concerning the Warrant Agent and Other Matters.

6.1. Concerning the Warrant Agent. The Warrant Agent:

6.1.1 shall have no duties or obligations other than those set forth herein including in Exhibit A and no duties or obligations shall be inferred or implied;

6.1.2 may rely on and shall be held harmless by the Company in acting upon any certificate, statement, instrument, opinion, notice, letter, electronic transmission, telegram or other document, or any security delivered to it, and reasonably believed by it to be genuine and to have been made or signed by the proper party or parties;

6.1.3 may rely on and shall be held harmless by the Company in acting upon written or oral instructions or statements from the Company with respect to any matter relating to its acting as Warrant Agent;

6.1.4 may consult with counsel satisfactory to it (including counsel for the Company) and shall be held harmless by the Company in relying on the advice or opinion of such counsel in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with such advice or opinion of such counsel;

6.1.5 solely shall make the final determination as to whether or not a Warrant received by Warrant Agent is duly, completely and correctly executed, and Warrant Agent shall be held harmless by the Company in respect of any action taken, suffered or omitted by Warrant Agent hereunder in good faith and in accordance with its determination; 6.1.6 shall not be obligated to take any legal or other action hereunder which might, in its judgment subject or expose it to any expense or liability unless it shall have been furnished with an indemnity satisfactory to it; and

6.1.6 shall not be liable or responsible for any failure of the Company to comply with any of its obligations relating to the Registration Statement or this Warrant Agreement, including without limitation obligations under applicable regulation or law.

6.2. Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of shares of Common Stock upon the exercise of Warrants, but the Company shall not be obligated to pay any transfer taxes in respect of the Warrants or such shares.

6.3. Resignation, Consolidation, or Merger of Warrant Agent.

6.3.1. Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving sixty (60) days' notice in writing to the Company. If the office of the Warrant Agent becomes vacant by resignation or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent or by the holder of the Warrant (who shall, with such notice, submit his Warrant for inspection by the Company), then the holder of any Warrant may apply to the Supreme Court of the State of New York for the County of New York for the appointment of a successor Warrant Agent at the Company's cost. Any successor Warrant Agent, whether appointed by the Company or by such court, shall be a corporation organized and existing under the laws of the United States of America or any state thereof or the District of Columbia, in good standing, which is authorized under such laws to exercise corporate trust, stock transfer, or shareholder services powers and which has at the time of its appointment as Warrant Agent a combined capital and surplus of at least \$50 million or (b) an affiliate of a legal business entity described in clause (a) of this sentence. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed; but if for any reason it becomes necessary or appropriate, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transferring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

6.3.2. Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the transfer agent for the Common Stock not later than the effective date of any such appointment.

6.3.3. Merger or Consolidation of Warrant Agent. Any corporation into which the Warrant Agent may be merged or with which it may be consolidated or any corporation resulting from any merger or consolidation to which the Warrant Agent shall be a party shall be the successor Warrant Agent under this Warrant Agreement without any further act.

6.4. Fees and Expenses of Warrant Agent.

6.4.1. Remuneration. The Company agrees to pay the Warrant Agent reasonable remuneration in an amount separately agreed to between Company and Warrant Agent for its services as Warrant Agent hereunder and will reimburse the Warrant Agent upon demand for all expenditures that the Warrant Agent may reasonably incur in the execution of its duties hereunder. The fees must be paid upon execution of this Warrant Agreement, before any services hereunder commence. An invoice for any out-of-pocket and/or per item fees incurred will be rendered to and payable by the Company within fifteen (15) days of the date of said invoice. It is understood and agreed that all services to be performed by Warrant Agent shall cease if full payment for its services has not been received in accordance with the above schedule, and said services will not commence thereafter until all payment due has been received by Warrant Agent.

6.4.2. Further Assurances. The Company agrees to perform, execute, acknowledge, and deliver or cause to be performed, executed, acknowledged, and delivered all such further and other acts, instruments, and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Warrant Agreement.

6.5. Liability of Warrant Agent.

6.5.1. Reliance on Company Statement. Whenever in the performance of its duties under this Warrant Agreement, the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a statement signed by the President of the Company and delivered to the Warrant Agent. The Warrant Agent may rely upon such statement for any action taken or suffered in good faith by it pursuant to the provisions of this Warrant Agreement.

6.5.2. Indemnity. The Warrant Agent shall be liable hereunder only for its own gross negligence, willful misconduct or bad faith. The Company agrees to indemnify the Warrant Agent and save it harmless against any and all liabilities, including judgments, claims, losses, damages, costs and reasonable counsel fees, for anything done or omitted by the Warrant Agent in the execution of this Warrant Agreement except as a result of the Warrant Agent's gross negligence, willful misconduct, or bad faith.

6.5.3. Limitation of Liability.

- (i) Warrant Agent shall not be liable or deemed to be in default for any delay or failure to perform under this Warrant Agreement or any schedule resulting directly or indirectly from any cause beyond Warrant Agent's reasonable control, including, without limitation, natural disasters, and failure of utilities or carriers. Warrant Agent's aggregate liability for any and all damages arising from or relating to any and all claims and causes of action in connection with the services provided under this Warrant Agreement or any schedule hereto (the "Services"), shall not exceed the lesser of: (i) the amount of actual damages incurred by Company; and (ii) an amount equal to the fees and charges (excluding pass-through charges) paid by Company to Warrant Agent with respect to the Services.
- (ii) NOTWITHSTANDING ANYTHING IN THIS WARRANT AGREEMENT TO THE CONTRARY, NEITHER PARTY TO THIS WARRANT AGREEMENT SHALL BE LIABLE TO THE OTHER PARTY FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL OR INCIDENTAL DAMAGES UNDER ANY PROVISION OF THIS WARRANT

AGREEMENT OR FOR ANY CONSEQUENTIAL, INDIRECT, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES ARISING OUT OF ANY ACT OR FAILURE TO ACT HEREUNDER EVEN IF THAT PARTY HAS BEEN ADVISED OF OR HAS FORESEEN THE POSSIBILITY OF SUCH DAMAGES.

- (iii) This Section allocates the risks under this Warrant Agreement between Warrant Agent and Company and is viewed by the parties as an integral part of the business arrangement between them. The pricing and other terms and conditions of this Warrant Agreement and any schedule hereto reflect this allocation of risk and the limitations specified herein.

6.5.4. Disputes. In the event any question or dispute arises with respect to the proper interpretation of this Warrant Agreement or the Warrant Agent's duties hereunder or the rights of the Company or of any holder of a Warrant, the Warrant Agent shall not be required to act and shall not be held liable or responsible for refusing to act until the question or dispute has been judicially settled (and the Warrant Agent may, if it deems it advisable, but shall not be obligated to, file a suit in interpleader or for a declaratory judgment for such purpose) by final judgment rendered by a court of competent jurisdiction, binding on all parties interested in the matter which is no longer subject to review or appeal, or settled by a written document in form and substance satisfactory to the Warrant Agent and executed by the Company and each other interested party. In addition, the Warrant Agent may require for such purpose, but shall not be obligated to require, the execution of such written settlement by all the Warrant holders, as applicable, and all other parties that may have an interest in the settlement.

6.5.5. Exclusions. The Warrant Agent shall have no responsibility with respect to the validity of this Warrant Agreement or with respect to the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Warrant Agreement or in any Warrant; nor shall it be responsible to make any adjustments required under the provisions of Section 4 hereof or responsible for the manner, method, or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment; nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Warrant Agreement or any Warrant or as to whether any shares of Common Stock will when issued be valid and fully paid and nonassessable.

6.6. Acceptance of Agency. The Warrant Agent hereby accepts the agency established by this Warrant Agreement and agrees to perform the same upon the terms and conditions herein set forth and among other things, shall account promptly to the Company with respect to Warrants exercised and concurrently account for, and pay to the Company, all moneys received by the Warrant Agent for the purchase of shares of Common Stock through the exercise of Warrants.

7. Miscellaneous Provisions.

7.1. Successors. All the covenants and provisions of this Warrant Agreement by or for the benefit of the Company or the Warrant Agent shall bind and inure to the benefit of their respective successors and assigns.

7.2. Notices. Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Warrant Agent or by the holder of any Warrant to or on the Company shall be sufficiently given when so delivered if by hand or overnight delivery or if sent by certified mail or private courier service within five days after deposit of such notice, postage prepaid, addressed (until another address is filed in writing by the Company with the Warrant Agent), as follows:

Pulse Biosciences, Inc.
3957 Point Eden Way
Hayward, California 94545
Attention: Sandra Gardiner
and a copy via email to:

Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the holder of any Warrant or by the Company to or on the Warrant Agent shall be sufficiently given when so delivered if by hand or overnight delivery or if sent by certified mail or private courier service within five days after deposit of such notice, postage prepaid, addressed (until another address is filed in writing by the Warrant Agent with the Company), as follows:

Broadridge Corporate Issuer Solutions, Inc.,
51 Mercedes Way
Edgewood, NY 11717
Attn: Corporate Actions Department

With a copy to:
Broadridge Financial Solutions, Inc.
2 Gateway Center
Newark, New Jersey 07102
and a copy via email to:
legalnotices@broadridge.com
in each case, Attention: General Counsel

7.3. Applicable law. The validity, interpretation, and performance of this Warrant Agreement and of the Warrants shall be governed in all respects by the laws of the State of New York, without giving effect to conflicts of law principles that would result in the application of the substantive laws of another jurisdiction. The Company hereby agrees that any action, proceeding or claim against it arising out of or relating in any way to this Warrant Agreement shall be brought and enforced in the courts of the State of New York or the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenience forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 7.2 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim.

7.4. Persons Having Rights under this Warrant Agreement. Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the registered holders of the Warrants, any right, remedy, or claim under or by reason of this Warrant Agreement or of any covenant, condition, stipulation, promise, or agreement hereof. All covenants, conditions, stipulations, promises, and agreements contained in this Warrant Agreement shall be for the sole and exclusive benefit of the parties hereto and their successors and assigns and of the registered holders of the Warrants.

7.5. Examination of the Warrant Agreement. A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent in the city of Edgewood, State of New York, for inspection by the registered holder of any Warrant. The Warrant Agent may require any such holder to submit his Warrant for inspection by it.

7.6. Counterparts. This Warrant Agreement may be executed in any number of original or electronic counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

7.7. Effect of Headings. The Section headings herein are for convenience only and are not part of this Warrant Agreement and shall not affect the interpretation thereof.

7.8. Amendments. This Warrant Agreement may be amended by the parties hereto without the consent of any registered holder for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provision contained herein or adding or changing any other provisions with respect to matters or questions arising under this Warrant Agreement as the parties may deem necessary or desirable and that the parties deem shall not adversely affect the interest of the registered holders.

7.9. Severability. This Warrant Agreement shall be deemed severable, and the invalidity or unenforceability of any term or provision hereof shall not affect the validity or enforceability of this Warrant

Agreement or of any other term or provision hereof. Furthermore, in lieu of any such invalid or unenforceable term or provision, the parties hereto intend that there shall be added as a part of this Warrant Agreement a provision as similar in terms to such invalid or unenforceable provision as may be possible and be valid and enforceable.

7.10. Force Majeure. In the event either party is unable to perform its obligations under the terms of this Warrant Agreement because of acts of God, strikes, natural disasters, failure of carrier or utilities, equipment or transmission failure or damage that is reasonably beyond its control, or any other cause that is reasonably beyond its control, such party shall not be liable for damages to the other for any damages resulting from such failure to perform or otherwise from such causes. Performance under this Warrant Agreement shall resume when the affected party or parties are able to perform substantially that party's duties.

7.11. Severability. If any provision of this Warrant Agreement shall be held invalid, unlawful, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

7.12. Confidentiality. Warrant Agent and the Company agree that all books, records, information and data pertaining to the business of the other party which are exchanged or received pursuant to the negotiation or the carrying out of this Warrant Agreement, including the fees for services set forth in the attached schedule, shall remain confidential and shall not be voluntarily disclosed to any third party (except the party's attorneys, subcontractors, vendors, representatives, agents, advisors and affiliates), except with the written approval of the other party or as may be required by law or regulatory authority.

7.13. Survival. The applicable provisions of Sections 6 and 7 shall survive any termination of this Warrant Agreement.

7.14. Merger of Agreement. This Warrant Agreement constitutes the entire agreement between the parties hereto and supersedes any prior agreement with respect to the subject matter hereof whether oral or written, provided, however, that nothing herein contained shall amend, replace or supersede any agreement between the Company and Warrant Agent to act as the Company's transfer agent which agreement shall remain in full force and effect.

7.15. GDPR and Territorial Limitation.

7.15.1. To the extent Warrant Agent processes personal information that would constitute EU Personal Data as defined under Regulation (EU) 2016/679 (General Data Protection Regulation), Warrant Agent will comply with the provisions of the Warrant Agent GDPR Annex, found at <https://www.broadridge.com/GDPR-Annex> by using password .

7.15.2. The Services are intended for use in the United States. Except with respect to representations pertaining to the EU Personal Data as defined under Regulation (EU) 2016/679 (General Data Protection Regulation) in Section 7.15.1 Warrant Agent makes no representation that the Services are appropriate or available for use outside the United States, and access to the Services from territories where the Services are illegal is prohibited. Company is responsible for compliance with all local laws in connection with its use of the Services.

IN WITNESS WHEREOF, this Warrant Agreement has been duly executed by the parties hereto as of the day and year first above written.

PULSE BIOSCIENCES, INC.

By: _____
Name: Sandra A. Gardiner
Title: Chief Financial Officer, Executive Vice President of
Finance and Administration, Secretary and
Treasurer

**BROADRIDGE CORPORATE ISSUER SOLUTIONS,
INC.**

By: _____
Name:
Title:

EXHIBIT A

**AGENT AND FEE SCHEDULE
Warrant Agent**

Project Management Fee:	\$2,500.00 (one time)
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Warrant Agent Fee, monthly:	\$500.00
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Per Warrant exercise, (if applicable) billable to Pulse on a monthly basis:	\$25.00
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Warrant Agent shall be entitled to reimbursement of all reasonable out-of-pocket expenses including but not limited to postage, stationery and supplies, which will be billed as incurred during the performance of Warrant Agent's duties hereunder, including without limitation:

Out of pocket expenses

- Postage with shared Pre-Sort savings (to be paid in advance)¹
- Overnight delivery / courier service / photocopy service
- Envelopes – outer and BRE (Business Reply Envelopes)¹
- Brochures and enrollment materials
- Insurance and courier fees
- Printing of check forms and blank stock certificates

Although Warrant Agent may advance payment for these expenses and then invoice Company, there are occasions when Warrant Agent may require advance payment toward large expense items.

¹ Rates are subject to change upon U.S. and foreign postage rate increases.



Wilson Sonsini Goodrich & Rosati
Professional Corporation
650 Page Mill Road
Palo Alto, California 94304-1050
O: 650.493.9300
F: 650.493.6811

May 1, 2020

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

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Pulse Biosciences, Inc., a Delaware corporation (the "Company"), in connection with the filing by the Company with the Securities and Exchange Commission (the "Commission") of a Registration Statement on Form S-3, as amended from time to time (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Act"). Pursuant to the Registration Statement, the Company plans to distribute non-transferable subscription rights to purchase units (the "Rights") to its stockholders as of the Record Date (as defined in the Registration Statement), entitling the holders thereof to purchase an aggregate of up to \$30,000,000 of units (the "Units"), each unit consisting of one share of the Company's common stock, \$0.001 par value per share (the "Common Stock") and 0.15 warrants to purchase Common Stock (the "Warrants"), and shares of Common Stock issuable upon exercise of the Warrants.

We have examined the Registration Statement, together with the documents incorporated by reference therein, the related prospectus forming a part thereof (the "Prospectus"), and the form of certificate representing the Rights and form of Warrant. In addition, we have examined originals or copies, certified or otherwise identified to our satisfaction, of such other instruments, documents, certificates and records which we have deemed relevant and necessary for the basis of our opinions hereinafter expressed. In such examination, we have assumed: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as copies; (iii) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; (iv) that the Registration Statement, and any amendments thereto (including post-effective amendments), will have become effective under the Act; (v) that the Units, including the Common Stock and Warrants, and the Common Stock issuable upon the valid exercise of the Warrants, will be issued and sold in compliance with applicable U.S. federal and state securities laws and in the manner stated in the Registration Statement and the Prospectus; (vi) the legal capacity of all natural persons; (vii) that the Common Stock issuable upon exercise of the Warrants will be reserved for issuance upon such exercise; and (viii) with respect to shares of Common Stock offered by the Company, that there will be sufficient shares of Common Stock authorized under the Company's organizational documents that are not otherwise reserved for issuance. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware (including the statutory provisions and all applicable judicial decisions interpreting those laws) and the federal laws of the United States of America.

We express no opinion as to (i) the effect of any bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium or other similar laws relating to or affecting the rights of creditors generally, (ii) rights to indemnification and contribution which may be limited by applicable law or equitable principles, or (iii) the effect of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, the effect of judicial discretion and the possible unavailability of specific performance, injunctive relief or other equitable relief, and the limitations on rights of acceleration, whether considered in a proceeding in equity or at law.

AUSTIN BEIJING BOSTON BRUSSELS HONG KONG LONDON LOS ANGELES NEW YORK PALO ALTO
SAN DIEGO SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, DC WILMINGTON, DE

Pulse Biosciences, Inc.
3957 Point Eden Way
Hayward, California 94545
May 1, 2020
Page 2

On the basis of the foregoing, we are of the opinion that:

1. the Rights, when issued, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
2. The Units, when duly executed and delivered upon valid exercise of the Rights, including without limitation, payment of the consideration therefor as contemplated in the Prospectus, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
3. The Common Stock included as part of the Units, when issued and delivered as contemplated in the Prospectus, will be validly issued, fully paid and non-assessable.
4. The Warrants, when duly executed and delivered as contemplated in the Prospectus, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.
5. The Common Stock issuable upon the valid exercise of the Warrants in accordance with their terms, including without limitation, payment of the consideration therefor as described therein, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the above-referenced Registration Statement and to the reference to our name under the heading "Legal Matters" in the Prospectus forming a part of the Registration Statement. In giving such consent, we do not believe that we are "experts" within the meaning of such term as used in the Act or the rules and regulations of the Securities and Exchange Commission issued thereunder with respect to any part of the Registration Statement, including this opinion as an exhibit or otherwise.

Sincerely,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Pulse Biosciences, Inc.

We hereby consent to the use in this Amendment No. 3 to Registration Statement on Form S-3 (Registration No. 333-237577) of our report dated March 16, 2018, relating to Pulse Biosciences, Inc.'s consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for the year ended December 31, 2017, and the related notes, which is incorporated by reference in the Registration Statement.

We also consent to the reference to us under the caption "Experts" in the Registration Statement.

/s/ Gumbiner Savett Inc.
May 1, 2020
Santa Monica, California

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Amendment No. 3 to Form S-3 of our report dated March 16, 2020, 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, 2019. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte and Touche LLP

San Jose, California

May 1, 2020

THE TERMS AND CONDITIONS OF THE RIGHTS OFFERING ARE SET FORTH IN THE COMPANY'S PROSPECTUS DATED [•], 2020 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM BROADRIDGE CORPORATE ISSUER SOLUTIONS, INC., THE SUBSCRIPTION AGENT, BY CALLING (888) 789-8409.

**FORM OF INSTRUCTIONS AS TO USE OF PULSE BIOSCIENCES, INC.
NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATES**

PLEASE CONSULT THE SUBSCRIPTION AND INFORMATION AGENT,
YOUR BANK OR BROKER FOR ANY QUESTIONS

The following instructions relate to a rights offering by Pulse Biosciences, Inc., a Delaware corporation ("we," "us," "our," or the "Company"), to the stockholders (the "holder," or "you") of its common stock, par value \$0.001 per share (the "Common Stock"), as described in the prospectus dated [•], 2020 (the "Prospectus"). Holders of our Common Stock as of 5:00 p.m., Eastern Time, on May 14, 2020 (the "Record Date") are receiving, at no charge, non-transferable subscription rights (each, a "Subscription Right") to purchase up to an aggregate of \$30,000,000 units, each Unit consisting of one share of Common Stock and 0.15 warrants to purchase shares of Common Stock (the "Units," and each, a "Unit") at an cash price per Unit equal to the lesser of (i) \$7.01 (the "Initial Price") and (ii) the volume weighted average price of the Common Stock for the five trading day period through and including the Expiration Date (as defined below) (the "Alternate Price"). Each stockholder will receive one Subscription Right for each share of Common Stock owned on the Record Date and each Subscription Right will entitle its holder to purchase [•] Units at the Initial Price (each, a "Basic Subscription Right"). To the extent the Alternate Price is lower than the Initial Price, we will sell additional Units in the rights offering to you, but we will not sell fractional Units.

The Subscription Rights will be evidenced by non-transferable subscription rights certificates (the "Non-Transferable Subscription Rights Certificate"). The number of Subscription Rights to which you are entitled is printed on the face of your Non-Transferable Subscription Rights Certificate.

Over-Subscription Right

If a holder purchases all of the Units available to it pursuant to its Basic Subscription Rights, it may also exercise an over-subscription right (the "Over-Subscription Right") to purchase a portion of any Units that are not purchased by other stockholders through the exercise of their Basic Subscription Rights (the "Unsubscribed Units"), subject to the availability and pro rata allocation of the Unsubscribed Units among all persons exercising their Over-Subscription Rights.

If you wish to exercise your Over-Subscription Right, you should indicate the number of additional Units that you would like to purchase in the space provided on your Non-Transferable Subscription Rights Certificate, as well as the number of shares that you beneficially own without giving effect to any Units to be purchased in this rights offering. When you send in your Non-Transferable Subscription Rights Certificate, you must also send the full purchase price in cash, as provided herein, for the number of additional Units that you have requested to purchase, at the Initial Price (in addition to the payment in cash, as provided herein, due for Units purchased through your Basic Subscription Rights).

If the number of Units remaining after the exercise of all Basic Subscription Rights is not sufficient to satisfy all requests for Units pursuant to Over-Subscription Rights, you will be allocated additional Units in the proportion which the number of Units you purchased through the Basic Subscription Rights bears to the total number of Units that all oversubscribing stockholders purchased through the Basic Subscription Rights. Broadridge Corporate Issuer Solutions, Inc. (the "Subscription Agent") will return any excess payments in the form in which made.

As soon as practicable after the Expiration Time (defined blow), the Subscription Agent will determine Units that you may purchase pursuant to the Over-Subscription Right. If you request and pay for more Units than are allocated to you, we will refund the overpayment in the form in which made. In connection with the exercise of the Over-Subscription Right, banks, brokers and other nominee holders of Subscription Rights who act on behalf of beneficial owners will be required to certify to us and to the Subscription Agent as to the aggregate number of Subscription Rights exercised, and the number of Units requested through the Over-Subscription Right, by each beneficial owner on whose behalf the nominee holder is acting.

We will not sell fractional Units, but rather will round down the aggregate number of Units you are entitled to receive to the nearest whole number, with the total exercise price being adjusted accordingly. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid by a subscriber (the “Excess Subscription Amount”) will be put towards the purchase of additional Units in the rights offering (either towards your Basic Subscription Rights, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Rights in full). Otherwise, any excess subscription payments received by the Subscription Agent will be returned, without interest, as soon as practicable.

You are not required to exercise any or all of your Subscription Rights. However, if you do not exercise your Subscription Rights and the rights offering is completed, the number of shares of our Common Stock you own will not change but your percentage ownership of our total outstanding voting stock may decrease because shares may be purchased by other stockholders in the rights offering. Your percentage ownership of our voting stock may also decrease if you do not exercise your Subscription Right in full. Please see the discussion of risk factors related to the rights offering, including dilution, under the heading “Risk Factors—Risks Related to The Rights Offering,” in the Prospectus.

Expiration Time

THE SUBSCRIPTION RIGHTS WILL EXPIRE AND WILL HAVE NO VALUE AT 5:00 P.M., EASTERN TIME, ON JUNE 8, 2020, SUBJECT TO EXTENSION OR EARLIER TERMINATION (THE “EXPIRATION DATE”). YOUR NON-TRANSFERABLE SUBSCRIPTION RIGHTS CERTIFICATE AND SUBSCRIPTION PAYMENT FOR EACH RIGHT THAT IS EXERCISED PURSUANT TO THE SUBSCRIPTION RIGHT MUST BE RECEIVED BY THE SUBSCRIPTION AGENT ON OR BEFORE 5:00 P.M., EASTERN TIME, ON EXPIRATION DATE. ONCE YOU HAVE EXERCISED YOUR SUBSCRIPTION RIGHT, SUCH EXERCISE MAY NOT BE REVOKED, EVEN IF YOU LATER LEARN INFORMATION THAT YOU CONSIDER TO BE UNFAVORABLE TO THE EXERCISE OF YOUR SUBSCRIPTION RIGHTS. SUBSCRIPTION RIGHTS NOT EXERCISED PRIOR TO 5:00 P.M., EASTERN TIME, ON THE EXPIRATION DATE WILL EXPIRE WITHOUT VALUE.

If you do not exercise your Subscription Rights prior to that time, your Subscription Rights will expire and will no longer be exercisable. We will not be required to sell Units to you if the Subscription Agent receives your Non-Transferable Subscription Rights Certificate(s) or your subscription payment after 5:00 P.M., Eastern Time on the Expiration Date (the “Expiration Time”), regardless of when the Non-Transferable Subscription Rights Certificate(s) and subscription payment were sent. If you send your Non-Transferable Subscription Rights Certificate(s) and Initial Price payment by mail, we recommend that you send them by registered mail, properly insured, with return receipt requested, and that a sufficient number of days be allowed to ensure delivery to the Subscription Agent and clearance of payment before the expiration of the subscription period. See “The Rights Offering—Expiration of this rights offering and Extensions, Amendments and Termination” in the Prospectus.

The Common Stock and warrants issued upon exercise of the Subscription Rights to purchase Units will be delivered as soon as practicable after the Expiration Time, and after all pro rata allocations and adjustments have been completed.

If you have any questions concerning the rights offering, please contact the Subscription Agent, Broadridge Corporate Issuer Solutions, Inc., at the following address and number:

Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718

Holder Inquiries:
(888)-789-8409 (toll free)
shareholder@broadridge.com

1. Method of Subscription—Exercise of Subscription Rights.

To exercise your Subscription Rights, please: (1) complete Section 1 on your Non-Transferable Subscription Rights Certificate, attached to these instructions; (2) sign Section 1 of your Non-Transferable Subscription Rights Certificate; and (3) mail the properly completed and executed Non-Transferable Subscription Rights Certificate

evidencing such Basic Subscription Rights and, if applicable, Over-Subscription Rights subscribed, together with payment in full of the Initial Price for each Unit subscribed for pursuant to the Basic Subscription Rights and, if applicable, Over-Subscription Rights, to the Subscription Agent, on or prior to the Expiration Time.

Additionally, if the Common Stock and warrants issued pursuant to the Units to be sold pursuant to the Subscription Rights are to be issued in a name other than that of the registered holder, or sent to an address other than that shown on the front of the Non-Transferable Subscription Rights Certificate, please complete Section 2 of the Non-Transferable Subscription Rights Certificate and obtain a signature guarantee as described below prior to mailing the Non-Transferable Subscription Rights Certificate to the Subscription Agent, prior to the Expiration Time. Payment of the Initial Price will be held in a segregated account to be maintained by the Subscription Agent.

(a) *Method of Execution*

(i) *Execution by Registered Holder.* Your signature on the Non-Transferable Subscription Rights Certificate must correspond with the name of the registered holder exactly as it appears on the face of the Non-Transferable Subscription Rights Certificate without any alteration or change whatsoever. Persons who sign the Non-Transferable Subscription Rights Certificate in a representative or other fiduciary capacity must indicate their capacity when signing and, unless waived by the Subscription Agent in its sole and absolute discretion, must present to the Subscription Agent satisfactory evidence of their authority to so act.

(ii) *Execution by Person Other than Registered Holder.* If the Non-Transferable Subscription Rights Certificate is executed by a person other than the holder named on the face of the Non-Transferable Subscription Rights Certificate, proper evidence of authority of the person executing the Non-Transferable Subscription Rights Certificate must accompany the same unless, for good cause, the Subscription Agent dispenses with proof of authority.

(iii) *Signature Guarantees.* If you completed any part of Section 2 of the Non-Transferable Subscription Rights Certificate to provide that the Common Stock and warrants issued pursuant to the Units sold pursuant to your exercise of Subscription Rights to be (x) issued in a name other than that of the registered holder, or (y) sent to an address other than that shown on the front of the Non-Transferable Subscription Rights Certificate, your signature in Section 1 must be guaranteed in Section 2 by an “Eligible Guarantor Institution,” as such term is defined in Rule 17Ad-15 of the Securities Exchange Act of 1934, such as a member firm of a registered national securities exchange or a member of the Financial Industry Regulatory Authority, Inc., or a commercial bank or trust company having an office or correspondent in the United States, or by a member of a Stock Transfer Association approved medallion program such as STAMP, SEMP or MSP, subject to standards and procedures adopted by the Subscription Agent.

(b) *Method of Payment*

Payments must be made in full in U.S. currency by:

- uncertified check drawn against a U.S. bank payable to “Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)”;
- wire transfer of immediately available funds to accounts maintained by the Subscription Agent for purposes of accepting subscription in the rights offering at:

Beneficiary Account Name: Broadridge Corporate Issuer Solutions
Account Number: 4124218686

ABA/Routing number: 121000248
Bank: Wells Fargo
420 Montgomery Street
San Francisco, CA 94104
United States

For Further Credit: Pulse Biosciences, Inc.
Account Number: 4396288102

- a certified check, bank draft, or cashier’s check drawn against a U.S. bank payable to “Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)”;

- U.S. Postal money order payable to “Broadridge Corporate Issuer Solutions, Inc. (acting as Subscription Agent for Pulse Biosciences)”.

Payments will be deemed to have been received upon (i) clearance of any uncertified check, (ii) receipt by the Subscription Agent of any certified check, bank draft, or cashier’s check drawn upon a U.S. bank or of any U.S. Postal money order or (iii) receipt of collected funds in the Subscription Account designated above. If paying by uncertified personal check, please note that the funds paid thereby may take at least five (5) business days to clear. Accordingly, holders who wish to pay the Initial Price by means of uncertified personal check are urged to make payment sufficiently in advance of the Expiration Time to ensure that such payment is received and clears by such date and are urged to consider payment by means of certified check, bank draft, cashier’s check, U.S. Postal money order, or wire transfer of funds. Any wire transfer should clearly indicate the identity of the subscriber who is paying the Initial Price by wire transfer.

If you do not indicate the number of Subscription Rights being exercised, or if you do not forward the full subscription payment for the number of Subscription Rights that you indicate are being exercised, then you will be deemed to have exercised the maximum number of Subscription Rights that may be exercised with the aggregate subscription payment you delivered to the Subscription Agent. Any excess subscription payments received by the Subscription Agent will be returned to you by mail, without interest, as soon as practicable after completion of the rights offering and after all pro rata allocations and adjustments have been completed.

Fractional Units resulting from the exercise of the Subscription Rights will be eliminated by rounding down to the nearest whole Unit, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the Subscription Agent will be returned, without interest, as soon as practicable.

(c) Method of Delivery

Non-Transferable Subscription Rights Certificate and payments of Initial Price must be delivered to the Subscription Agent by one of the methods described below:

If delivering by hand or overnight courier:
Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS IWS
51 Mercedes Way
Edgewood, NY 11717

If delivering by first class mail:
Broadridge Corporate Issuer Solutions, Inc.
Attn: BCIS Re-Organization Dept.
P.O. Box 1317
Brentwood, NY 11717-0718

Delivery to an address or by a method other than those above will not constitute valid delivery.

The method of delivery of Non-Transferable Subscription Rights Certificates and payment of the Initial Price to the Subscription Agent will be at the election and risk of the Subscription Rights holder. However, if you elect to exercise your Subscription Rights, we urge you to consider using a certified check, bank draft, cashier’s check, U.S. Postal money order, or wire transfer of funds to ensure that the Subscription Agent receives your funds prior to the Expiration Time. If you send an uncertificated check, payment will not be deemed to have been received by the Subscription Agent until the check has cleared, but if you send a certified check, bank draft, or cashier’s check drawn upon a U.S. bank, or a U.S. Postal money order directly to the Subscription Agent’s account, payment will be deemed to have been received by the Subscription Agent immediately upon receipt of such instruments. Any personal check used to pay for Units must clear the appropriate financial institutions prior to the Expiration Time. The clearinghouse may require at least five (5) business days. Accordingly, holders that wish to pay the Initial Price by means of an uncertified personal check are urged to make payment sufficiently in advance of the Expiration Date to ensure such payment is received and clears by such date.

2. Issuance of Common Stock and Warrants.

The following deliveries and payments will be made and/or issued to the address shown on the face of your Non-Transferable Subscription Rights Certificate, unless you provide instructions to the contrary in your Non-Transferable Subscription Rights Certificate.

- (a) *Basic Subscription Rights.* As soon as practicable following the Expiration Time and the valid exercise of the Subscription Rights, we will issue to each exercising Subscription Rights holder shares in book-entry, or uncertificated, form representing shares of Common Stock and warrants included in the Units purchased pursuant to the Basic Subscription Rights.

- (b) *Over-Subscription Right.* As soon as practicable following the Expiration Time and after all prorations and adjustments contemplated by the terms of the rights offering have been effected, we will issue to each Rights holder that validly exercises the Over-Subscription Right shares in book-entry, or uncertificated, form representing the number of shares of Common Stock and warrants included in the Units, if any, allocated to such Rights holder pursuant to the Over-Subscription Right.
- (c) *Excess Cash Payments.* As soon as practicable following the Expiration Time and after all prorations and adjustments contemplated by the terms of the rights offering have been effected, any excess subscription payments received in payment of the Initial Price will be mailed by the Subscription Agent to each Subscription Rights holder, without interest.

3. No Sale or Transfer of Subscription Rights.

The Subscription Rights granted to you are non-transferable and, therefore, you may not sell, transfer or assign your Subscription Rights to anyone.

4. Special Provisions Relating to the Delivery of Subscription Rights through the Depository Trust Company.

Banks, trust companies, securities dealers and brokers (each, a “Nominee”) that hold shares of our Common Stock on the Record Date as nominee for more than one beneficial owner may, upon proper showing to the Subscription Agent, exercise such beneficial owner’s Subscription Right through DTC on the same basis as if the beneficial owners were stockholders on the Record Date. Such Nominee may exercise the Subscription Rights on behalf of the exercising beneficial owner through DTC’s PSOP Function on the “agents subscription over PTS” procedure by (1) providing a certification as to the aggregate number of Subscription Rights exercised by the beneficial owner on whose behalf such Nominee is acting, and (2) instruct DTC to charge the Nominee’s applicable DTC account for the subscription payment for the new Units to facilitate the delivery of the full subscription payment to the Subscription Agent. DTC must receive the subscription instructions and payment for the new Units no later than the Expiration Time.

5. Form W-9.

Each Subscription Rights holder who elects to exercise Subscription Rights should provide the Subscription Agent with a correct Taxpayer Identification Number (TIN) on IRS Form W-9. See “Material U.S. Federal Income Tax Consequences — Information Reporting and Backup Withholding” in the Prospectus. Failure to provide the information on the form may subject such holder to a \$50 penalty for each such failure and to 24% federal income tax withholding with respect to dividends (including deemed dividends) that may be paid by the Company on shares of its Common Stock. Foreign Persons are generally required to provide an appropriate IRS Form W-8 rather than IRS Form W-9 and may be subject to withholding on dividends (including deemed dividends) at a rate of up to 30%.

FORM OF LETTER TO STOCKHOLDERS WHO ARE RECORD HOLDERS

PULSE BIOSCIENCES, INC.

Units
Offered Pursuant to Subscription Rights
Distributed to Stockholders
of Pulse Biosciences, Inc.

[•], 2020

Dear Stockholder:

Enclosed are materials relating to a rights offering by Pulse Biosciences, Inc., a Delaware corporation (“we,” “us,” “our,” or the “Company”), including the Prospectus dated [•], 2020 (the “Prospectus”). Please carefully review the Prospectus, which describes how you can participate in the rights offering. You will be able to exercise your subscription rights to purchase units, each unit consisting of one share of our common stock, par value \$0.001 per share (the “Common Stock”) and 0.15 warrants to purchase Common Stock, only during a limited period (the “Units,” and each, a “Unit”). Answers to some frequently asked questions about the rights offering can be found under the heading “Questions and Answers About the Rights Offering” in the Prospectus. Any prospective purchaser of Units pursuant to the exercise of the subscription rights should read the Prospectus, including without limitation the risk factors contained therein, prior to making any decision to invest in the Company.

In the rights offering, we are offering the rights to purchase an aggregate of up to \$30,000,000 of Units, as described in the Prospectus.

The subscription rights will expire if not exercised prior to 5:00 p.m., Eastern Time, on June 8, 2020 (the “Expiration Date,” and such time, the “Expiration Time”).

As described in the Prospectus, you will receive one subscription right to purchase [•] Units for each share of Common Stock (each, a “Basic Subscription Right”) owned at 5:00 p.m., Eastern Time, on May 14, 2020 (the “Record Date”). Each Basic Subscription Right will allow you to subscribe for [•] Units (rounded down to the nearest whole Unit, with the total subscription payment being adjusted accordingly, as discussed below) at a cash price per Unit equal to the lesser of (i) \$7.01 (the “Initial Price”) and (ii) the volume weighted average price of the Common Stock for the five trading day period through and including the Expiration Date (the “Alternate Price”). For example, if you owned 100 shares of Common Stock as of 5:00 p.m., Eastern Time, on the Record Date, you would receive 100 Basic Subscription Rights and would have the right to purchase [•] Units at the Initial Price. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid by a subscriber (the “Excess Subscription Amount”) will be put towards the purchase of additional Units in the rights offering (either towards your Basic Subscription Rights, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Rights in full), but fractional Units will not be sold.

In the event that you purchase all Units available to you pursuant to your Basic Subscription Rights, you may also exercise an over-subscription right (the “Over-Subscription Right,” collectively with the Basic Subscription Rights, the “Subscription Rights”) to purchase a portion of Units that are not purchased by stockholders through the exercise of their Basic Subscription Rights (the “Unsubscribed Units”), subject to the availability and pro rata allocation of the Unsubscribed Units among all persons exercising this Over-Subscription Right. To the extent the Unsubscribed Units are not sufficient to satisfy all of the properly exercised Over-Subscription Rights, then the Unsubscribed Units will be prorated among those who properly exercised Over-Subscription Right based on the number of shares each person subscribed for under the Basic Subscription Rights. If this pro rata allocation results in any person receiving a greater number of Unsubscribed Units than the person subscribed for pursuant to the exercise of the Over-Subscription Right, then such person will be allocated only that number of Unsubscribed Units for which the person oversubscribed, and the remaining Unsubscribed Units will be allocated among all other persons exercising the Over-Subscription Right on the same pro rata basis described above. The proration process will be repeated until all Unsubscribed Units have been allocated or all Over-Subscription Rights have been fulfilled, whichever occurs earlier.

You will be required to submit payment in full for all the Units you wish to buy with your Over-Subscription Right. Because we will not know the total number of Unsubscribed Units prior to the Expiration Time, if you wish

to maximize the number of Units you may purchase pursuant to your Over-Subscription Right, you will need to deliver payment in an amount equal to the aggregate Initial Price (the “Subscription Price”) for the maximum number of Units available to you, assuming that no stockholder other than you has purchased any Units pursuant to the Basic Subscription Rights and Over-Subscription Right. The Company will eliminate fractional Units resulting from the exercise of the Over-Subscription Right by rounding down to the nearest whole number, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the Broadridge Corporate Issuer Solutions, Inc. (the “Subscription Agent”) will be returned, without interest, as soon as practicable.

The Company can provide no assurances that you will actually be entitled to purchase the number of Units subscribed for pursuant to the exercise of your Over-Subscription Right in full at the expiration of the rights offering. The Company will not be able to satisfy your exercise of the Over-Subscription Right if all of our stockholders exercise their Basic Subscription Rights in full, and we will only honor an Over-Subscription Right to the extent sufficient Units are available following the exercise of Subscription Rights under the Basic Subscription Rights.

- To the extent the aggregate Initial Price of the maximum number of Unsubscribed Units available to you pursuant to the Over-Subscription Right is less than the amount you actually paid in connection with the exercise of the Over-Subscription Right, you will be allocated only the number of Unsubscribed Units available to you as soon as practicable after the Expiration Time, and your excess subscription payment received by the Subscription Agent will be returned, without interest, as soon as practicable.
- To the extent the amount you actually paid in connection with the exercise of the Over-Subscription Right is less than the aggregate Initial Price of the maximum number of Unsubscribed Units available to you pursuant to the Over-Subscription Right; you will be allocated the number of Unsubscribed Units for which you actually paid in connection with the Over-Subscription Right. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amount will be put towards the purchase of additional Units (either towards your Basic Subscription Rights, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Rights in full). See the discussion under the heading “The Rights Offering — Subscription Rights — Over-Subscription Rights” in the Prospectus.

You are not required to exercise any or all of your Subscription Rights. If you do not exercise your Subscription Rights and the rights offering is completed, the number of shares of our Common Stock you own will not change but your percentage ownership of our total outstanding voting stock may decrease because shares may be purchased by other stockholders in the rights offering. Your percentage ownership of our voting stock may also decrease if you do not exercise your Subscription Right in full. Please see the discussion of risk factors related to the rights offering, including dilution, under the heading “Risk Factors—Risks Related to the Rights Offering” in the Prospectus.

The Subscription Rights will be evidenced by a Non-Transferable Subscription Rights Certificate issued to stockholders of record and will cease to have any value after the Expiration Time.

Enclosed are copies of the following documents:

1. Prospectus;
2. Non-Transferable Subscription Rights Certificate;
3. Instructions as to Use of Pulse Biosciences, Inc. Non-Transferable Subscription Rights Certificates; and
4. A return envelope addressed to Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent.

Your prompt action is requested. To exercise the Subscription Rights, as indicated in the Prospectus, you should deliver to the Subscription Agent the properly completed and signed Non-Transferable Subscription Rights Certificate with payment of the Subscription Price in full for each Unit subscribed for pursuant to the Subscription Right. The Subscription Agent must receive the Non-Transferable Subscription Rights Certificate with payment of the Subscription Price prior to the Expiration Time. If you send your Non-Transferable Subscription Rights Certificate(s) and Subscription Price payment by mail, we recommend that you send them by registered mail, properly insured, with return receipt requested. We will not be required to sell Units to you if the Subscription Agent receives your Non-Transferable Subscription Rights Certificate or your subscription payment after that time, regardless of when the Non-Transferable Subscription Rights Certificate and subscription payment were sent. See the discussion under the heading “The Rights Offering—Expiration Date and Amendments” in the Prospectus.

Once you have exercised your Subscription Rights, such exercise may not be revoked, even if you later learn information that you consider to be unfavorable to the exercise of your Subscription Rights.

Additional copies of the enclosed materials may be obtained from Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent for this rights offering, by calling (888) 789-8409 (toll-free). Any questions or requests for assistance concerning the rights offering should be directed to the Subscription Agent.

Very truly yours,

Pulse Biosciences, Inc.

FORM OF LETTER TO BROKERS AND OTHER NOMINEE HOLDERS

PULSE BIOSCIENCES, INC.

Units
Offered Pursuant to Subscription Rights
Distributed to Stockholders
of Pulse Biosciences, Inc.

[•], 2020

To Securities Dealers, Commercial Banks, Trust Companies and Other Nominees:

This letter is being distributed to securities dealers, commercial banks, trust companies and other nominees in connection with the rights offering by Pulse Biosciences, Inc., a Delaware corporation (“we,” “us,” “our,” or the “Company”), of units, each unit consisting of one share of our common stock, par value \$0.001 per share (the “Common Stock”) and 0.15 warrants to purchase Common Stock (the “Units,” and each, a “Unit”), pursuant to non-transferable subscription rights distributed to all stockholders of record of the Company (the “Recordholders”) at 5:00 p.m., Eastern Time, on May 14, 2020 (the “Record Date”). The subscription rights, Units, Common Stock and warrants are described in the prospectus dated [•], 2020 (the “Prospectus”).

In the rights offering, we are offering the rights to purchase an aggregate of up to \$30,000,000 of Units, as described in the Prospectus.

The subscription rights will expire if not exercised prior to 5:00 p.m., Eastern Time, on June 8, 2020 (the “Expiration Date,” and such time, the “Expiration Time”).

As described in the Prospectus, each beneficial owner of shares of Common Stock registered in your name or the name of your nominee is entitled to one subscription right to purchase [•] Units for each share of Common Stock (each, a “Basic Subscription Right”) owned by such beneficial owner at 5:00 p.m., Eastern Time, on the Record Date. Each Basic Subscription Right will allow the holder thereof to subscribe for [•] Units (rounded down to the nearest whole Unit, with the total subscription payment being adjusted accordingly, as discussed below) at a cash price per Unit equal to the lesser of (i) \$7.01 (the “Initial Price”) and (ii) the volume weighted average price of the Common Stock for the five trading day period through and including the Expiration Date (the “Alternate Price”). For example, if a Recordholder owned 100 shares of Common Stock as of 5:00 p.m., Eastern Time, on the Record Date, it would receive 100 Basic Subscription Rights and would have the right to purchase [•] Units at the Initial Price. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid by a subscriber (the “Excess Subscription Amount”) will be put towards the purchase of additional Units in the rights offering (either towards the Recordholder’s Basic Subscription Rights, if available, or towards the Over-Subscription Right if the Recordholder has already exercised its Basic Subscription Rights in full), but fractional Units will not be sold.

In the event that Recordholder purchases all Units available to it pursuant to its Basic Subscription Rights, Recordholder may also exercise an over-subscription right (the “Over-Subscription Right,” collectively with the Basic Subscription Rights, the “Subscription Rights”) to purchase a portion of Units that are not purchased by other Recordholders through the exercise of their Basic Subscription Rights (the “Unsubscribed Units”), subject to the availability and pro rata allocation of the Unsubscribed Units among all persons exercising this Over-Subscription Right. To the extent the Unsubscribed Units are not sufficient to satisfy all of the properly exercised Over-Subscription Rights, then the Unsubscribed Units will be prorated among those who properly exercised Over-Subscription Right based on the number of shares each person subscribed for under the Basic Subscription Rights. If this pro rata allocation results in any person receiving a greater number of Unsubscribed Units than the person subscribed for pursuant to the exercise of the Over-Subscription Right, then such person will be allocated only that number of Unsubscribed Units for which the person oversubscribed, and the remaining Unsubscribed Units will be allocated among all other persons exercising the Over-Subscription Right on the same pro rata basis described above. The proration process will be repeated until all Unsubscribed Units have been allocated or all Over-Subscription Rights have been fulfilled, whichever occurs earlier.

Each Recordholder will be required to submit payment in full for all the Units it wishes to buy with its Over-Subscription Right. Because we will not know the total number of Unsubscribed Units prior to the Expiration

Time, if Recordholder wishes to maximize the number of Units Recordholder may purchase pursuant to its Over-Subscription Right, the Recordholder will need to deliver payment in an amount equal to the aggregate Initial Price for the maximum number of Units available to Recordholder, assuming that no stockholders other than the Recordholder has purchased any Units pursuant to the Basic Subscription Rights and Over-Subscription Right. The Company will eliminate fractional Units resulting from the exercise of the Over-Subscription Right by rounding down to the nearest whole number, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the Broadridge Corporate Issuer Solutions, Inc. (the “Subscription Agent”) will be returned, without interest, as soon as practicable.

The Company can provide no assurances that each Recordholder will actually be entitled to purchase the number of Units subscribed for pursuant to the exercise of its Over-Subscription Right in full at the expiration of the rights offering. The Company will not be able to satisfy its exercise of the Over-Subscription Right if all of our Recordholders exercise their Basic Subscription Rights in full, and we will only honor an Over-Subscription Right to the extent sufficient Units are available following the exercise of Subscription Rights under the Basic Subscription Rights.

- To the extent the aggregate Initial Price of the maximum number of Unsubscribed Units available to Recordholder pursuant to the Over-Subscription Right is less than the amount Recordholder actually paid in connection with the exercise of the Over-Subscription Right, Recordholder will be allocated only the number of Unsubscribed Units available to Recordholder as soon as practicable after the Expiration Time, and the Recordholder’s excess subscription payment received by the Subscription Agent will be returned, without interest, as soon as practicable.
- To the extent the amount Recordholder actually paid in connection with the exercise of the Over-Subscription Right is less than the aggregate Initial Price of the maximum number of Unsubscribed Units available to Recordholder pursuant to the Over-Subscription Right; Recordholder will be allocated the number of Unsubscribed Units for which the Recordholder actually paid in connection with the Over-Subscription Right. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amount will be put towards the purchase of additional Units (either towards the Recordholder’s Basic Subscription Rights, if available, or towards the Over-Subscription Right if the Recordholder has already exercised its Basic Subscription Rights in full). See the discussion under the heading “The Rights Offering—Subscription Rights—Over-Subscription Rights” in the Prospectus.

The Subscription Rights will be evidenced by a Non-Transferable Subscription Rights Certificate registered in the Recordholder’s name or its nominee and will cease to have any value after the Expiration Time.

We are asking persons who hold shares of Common Stock beneficially and who have received the Subscription Rights distributable with respect to those shares through a broker, dealer, commercial bank, trust company or other nominee, as well as persons who hold certificates of Common Stock directly and prefer to have such institutions effect transactions relating to the Subscription Rights on their behalf, to contact the appropriate institution or nominee and request it to effect the transactions for them. In addition, we are asking beneficial owners who wish to obtain a separate Non-Transferable Subscription Rights Certificate to contact the appropriate nominee as soon as possible and request that a separate Non-Transferable Subscription Rights Certificate be issued.

All commissions, fees and other expenses (including brokerage commissions and transfer taxes), other than fees and expenses of the Subscription Agent, incurred in connection with the exercise of the Subscription Rights will be for the account of the holder of the Subscription Rights, and none of such commissions, fees or expenses will be paid by the Company or the Subscription Agent.

Enclosed are copies of the following documents:

1. Prospectus;
2. Instructions as to Use of Pulse Biosciences, Inc. Non-Transferable Subscription Rights Certificates;
3. A form of letter which may be sent to your clients for whose accounts you hold shares of our Common Stock registered in your name or the name of your nominee;
4. Beneficial Owner Election;
5. Nominee Holder Certification; and

6. A return envelope addressed to Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent.

Your prompt action is requested. To exercise the Subscription Rights, as indicated in the Prospectus, you should deliver to the Subscription Agent the properly completed and signed Non-Transferable Subscription Rights Certificate with payment of the Initial Price in full for each Unit subscribed for pursuant to the Subscription Right. The Subscription Agent must receive the Non-Transferable Subscription Rights Certificate with payment of the Initial Price prior to the Expiration Time. Once a Recordholder has exercised its Subscription Right, such exercise may not be revoked, even if the Recordholder later learns information that it considers to be unfavorable to the exercise of its Subscription Rights.

Additional copies of the enclosed materials may be obtained from Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent for this rights offering, by calling (888) 789-8409 (toll-free). Any questions or requests for assistance concerning the rights offering should be directed to the Subscription Agent.

Very truly yours,

Pulse Biosciences, Inc.

FORM OF LETTER TO CLIENTS OF BROKERS AND OTHER NOMINEE HOLDERS

PULSE BIOSCIENCES, INC.

Units
Offered Pursuant to Subscription Rights
Distributed to Stockholders
of Pulse Biosciences, Inc.

[•], 2020

To Our Clients:

Enclosed for your consideration are a prospectus, dated [•], 2020 (the "Prospectus"), and the "Instructions as to Use of Pulse Biosciences, Inc. Non-Transferable Subscription Rights Certificates" relating to the rights offering by Pulse Biosciences, Inc., a Delaware corporation (the "Company"), of units, each unit consisting of one share of the Company's common stock, par value \$0.001 per share (the "Common Stock") and 0.15 warrants to purchase Common Stock (the "Units," and each, a "Unit"), pursuant to non-transferable subscription rights distributed to all stockholders of record of the Company at 5:00 p.m., Eastern Time, on May 14, 2020 (the "Record Date"). The subscription rights, Units, Common Stock and warrants are described in the Prospectus.

In the rights offering, the Company is offering the rights to purchase an aggregate of up to \$30,000,000 of Units, as described in the Prospectus.

The subscription rights will expire if not exercised prior to 5:00 p.m., Eastern Time, on June 8, 2020 (the "Expiration Date," and such time, the "Expiration Time").

As described in the Prospectus, you will receive one subscription right to purchase [•] Units for each share of Common Stock (each, a "Basic Subscription Right") owned at 5:00 p.m., Eastern Time, on the Record Date. Each Basic Subscription Right will allow you to subscribe for [•] Units (rounded down to the nearest whole Unit, with the total subscription payment being adjusted accordingly, as discussed below) at a cash price per Unit equal to the lesser of (i) \$7.01 (the "Initial Price") and (ii) the volume weighted average price of the Common Stock for the five trading day period through and including the Expiration Date (the "Alternate Price"). For example, if you owned 100 shares of Common Stock as of 5:00 p.m., Eastern Time, on the Record Date, you would receive 100 Basic Subscription Rights and would have the right to purchase [•] Units at the Initial Price. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any excess subscription amounts paid by a subscriber (the "Excess Subscription Amount") will be put towards the purchase of additional Units in the rights offering (either towards your Basic Subscription Rights, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Rights in full), but fractional Units will not be sold.

In the event that you purchase all Units available to you pursuant to your Basic Subscription Rights, you may also exercise an over-subscription right (the "Over-Subscription Right," collectively with the Basic Subscription Rights, the "Subscription Rights") to purchase a portion of Units that are not purchased by stockholders through the exercise of their Basic Subscription Rights (the "Unsubscribed Units"), subject to the availability and pro rata allocation of the Unsubscribed Units among all persons exercising this Over-Subscription Right. To the extent the Unsubscribed Units are not sufficient to satisfy all of the properly exercised Over-Subscription Rights, then the Unsubscribed Units will be prorated among those who properly exercised Over-Subscription Right based on the number of shares each person subscribed for under the Basic Subscription Rights. If this pro rata allocation results in any person receiving a greater number of Unsubscribed Units than the person subscribed for pursuant to the exercise of the Over-Subscription Right, then such person will be allocated only that number of Unsubscribed Units for which the person oversubscribed, and the remaining Unsubscribed Units will be allocated among all other persons exercising the Over-Subscription Right on the same pro rata basis described above. The proration process will be repeated until all Unsubscribed Units have been allocated or all Over-Subscription Rights have been fulfilled, whichever occurs earlier.

You will be required to submit payment in full for all the Units you wish to buy with your Over-Subscription Right. Because we will not know the total number of Unsubscribed Units prior to the Expiration Time, if you wish to maximize the number of Units you may purchase pursuant to your Over-Subscription Right, you will need to

deliver payment in an amount equal to the aggregate Initial Price for the maximum number of Units available to you, assuming that no stockholder other than you has purchased any Units pursuant to the Basic Subscription Rights and Over-Subscription Right. The Company will eliminate fractional Units resulting from the exercise of the Over-Subscription Right by rounding down to the nearest whole share, with the total subscription payment being adjusted accordingly. Any excess subscription payments received by the Broadridge Corporate Issuer Solutions, Inc. (the “Subscription Agent”) will be returned, without interest, as soon as practicable.

The Company can provide no assurances that each of you will actually be entitled to purchase the number of Units subscribed for pursuant to the exercise of your Over-Subscription Right in full at the expiration of the rights offering. The Company will not be able to satisfy your exercise of the Over-Subscription Right if all of our stockholders exercise their Basic Subscription Rights in full, and we will only honor an Over-Subscription Right to the extent sufficient Units are available following the exercise of Subscription Rights under the Basic Subscription Rights.

- To the extent the aggregate Initial Price of the maximum number of Unsubscribed Units available to you pursuant to the Over-Subscription Right is less than the amount you actually paid in connection with the exercise of the Over-Subscription Right, you will be allocated only the number of Unsubscribed Units available to you as soon as practicable after the Expiration Time, and your excess subscription payment received by the Subscription Agent will be returned, without interest, as soon as practicable.
- To the extent the amount you actually paid in connection with the exercise of the Over-Subscription Right is less than the aggregate Initial Price of the maximum number of Unsubscribed Units available to you pursuant to the Over-Subscription Right; you will be allocated the number of Unsubscribed Units for which you actually paid in connection with the Over-Subscription Right. If, on the Expiration Date, the Alternate Price is lower than the Initial Price, any Excess Subscription Amount will be put towards the purchase of additional Units (either towards your Basic Subscription Rights, if available, or towards the Over-Subscription Right if you have already exercised your Basic Subscription Rights in full). See the discussion under the heading “The Rights Offering — Subscription Rights — Over-Subscription Rights” in the Prospectus.

The Subscription Rights are evidenced by a Non-Transferable Subscription Rights Certificate issued to stockholders of record and will cease to have any value after the Expiration Time.

THE MATERIALS ENCLOSED ARE BEING FORWARDED TO YOU AS THE BENEFICIAL OWNER OF COMMON STOCK CARRIED BY US IN YOUR ACCOUNT BUT NOT REGISTERED IN YOUR NAME. THE SUBSCRIPTION RIGHTS MAY BE EXERCISED ONLY BY US AS THE RECORD OWNER AND PURSUANT TO YOUR INSTRUCTIONS.

Accordingly, we request instructions as to whether you wish us to elect to subscribe for any Units to which you are entitled pursuant to the terms and subject to the conditions set forth in the Prospectus. However, we urge you to read the document carefully before instructing us to exercise your Subscription Rights.

If you wish to have us, on your behalf, exercise the Subscription Rights for Units to which you are entitled, please so instruct us by completing, executing and returning to us the Beneficial Owner Election form.

Your Beneficial Owner Election form to us should be forwarded as promptly as possible in order to permit us to exercise your Subscription Rights on your behalf in accordance with the provisions of the rights offering. The rights offering will expire at the Expiration Time. Please contact us for our deadline with respect to your submission of the Beneficial Owner Election form. Once you have exercised your Subscription Rights, such exercise may not be revoked, even if you later learn information that you consider to be unfavorable to the exercise of your Subscription Rights.

Additional copies of the enclosed materials may be obtained from Broadridge Corporate Issuer Solutions, Inc., the Subscription Agent for this rights offering, by calling (888) 789-8409 (toll-free). Any questions or requests for assistance concerning the rights offering should be directed to the Subscription Agent.

Very truly yours,

Pulse Biosciences, Inc.

THE TERMS AND CONDITIONS OF THE RIGHTS OFFERING ARE SET FORTH IN THE COMPANY'S PROSPECTUS DATED [•], 2020 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM BROADRIDGE CORPORATE ISSUER SOLUTIONS, INC., THE SUBSCRIPTION AGENT, BY CALLING (888) 789-8409.

PULSE BIOSCIENCES, INC.

UNITS SUBSCRIBED FOR UPON
EXERCISE OF SUBSCRIPTION RIGHTS

NOMINEE HOLDER CERTIFICATION

The undersigned, a bank, broker, trustee, depository or other nominee holder of subscription rights (the "Subscription Rights") to purchase units, each unit consisting of one share of common stock of Pulse Biosciences, Inc., a Delaware corporation (the "Company"), par value \$0.001 per share ("Common Stock") and 0.15 warrants to purchase Common Stock (the "Units," and each, a "Unit"), pursuant to the rights offering described in the Company's prospectus dated [•], 2020 (the "Prospectus"), hereby certifies to the Company and Broadridge Corporate Issuer Solutions, Inc., as subscription agent for the rights offering, that (1) the undersigned has exercised on behalf of the beneficial owners thereof (which may include the undersigned), Subscription Rights for the number of Units specified below pursuant to the basic subscription right (as defined in the Prospectus), and on behalf of beneficial owners of Subscription Rights who have subscribed for the purchase of additional Units pursuant to the over-subscription right (as defined in the Prospectus), listing separately below a number of Units corresponding to such beneficial owners' exercised basic subscription right and a number of Units corresponding to such beneficial owners' exercised over-subscription right (without identifying any such beneficial owner), and (2) to the extent any beneficial owner has exercised their oversubscription right, each such beneficial owner's basic subscription right has been exercised in full:

	NUMBER OF SHARES OWNED ON RECORD DATE	NUMBER OF UNITS SUBSCRIBED FOR PURSUANT TO BASIC SUBSCRIPTION RIGHT	NUMBER OF UNITS SUBSCRIBED FOR PURSUANT TO OVER-SUBSCRIPTION RIGHT
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

Name of Bank, Broker, Trustee, Depository or Other Nominee:

By: _____
Authorized Signature

Name: _____
(Please print or type)

Title: _____
(Please print or type)

Provide the following information if applicable:

Depository Trust Company (“DTC”) Participant Number

Participant: _____

By: _____
Authorized Signature

Name: _____
(Please print or type)

Title: _____
(Please print or type)

DTC Subscription Confirmation Number(s)

THE TERMS AND CONDITIONS OF THE RIGHTS OFFERING ARE SET FORTH IN THE COMPANY'S PROSPECTUS DATED [•], 2020 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM BROADRIDGE CORPORATE ISSUER SOLUTIONS, INC., THE SUBSCRIPTION AGENT, BY CALLING (888) 789-8409.

PULSE BIOSCIENCES, INC.

BENEFICIAL OWNER ELECTION FORM

I (We), the beneficial owner(s) of shares of common stock, par value \$0.001 per share (the "Common Stock"), of Pulse Biosciences, Inc., a Delaware corporation (the "Company"), acknowledge receipt of your letter, the prospectus dated [•], 2020 (the "Prospectus"), and the other enclosed materials relating to the offering of Common Stock and warrants to purchase Common Stock issuable upon the exercise of subscription rights to purchase units ("Units," and such rights, the "Subscription Rights") as described in the Prospectus.

In this form, I (we) instruct you whether to exercise Subscription Rights to purchase Units distributed with respect to the Common Stock held by you for my (our) account, pursuant to the terms and subject to the conditions set forth in the Prospectus and the related "Form of Instructions as to use of Pulse Biosciences, Inc. Non-Transferable Subscription Rights Certificates." Each Unit will consist of one share of Common stock and 0.15 warrants. The Common Stock and warrants comprising the Units will separate upon the closing of the rights offering and will be issued separately, however, they may only be purchased as a Unit and the Unit will not trade as a separate security. Each warrant will be exercisable for one share of Common Stock at an exercise price equivalent to the subscription price through its expiration five years from the date of issuance.

I (We) hereby instruct you as follow:

(CHECK THE APPLICABLE BOXES AND PROVIDE ALL REQUIRED INFORMATION)

Box 1. Please DO NOT EXERCISE SUBSCRIPTION RIGHTS for Units.

If you checked Box 1, please sign and date this form and mail it to your broker, custodian bank or your other nominee that holds your shares.

Box 2. Please EXERCISE SUBSCRIPTION RIGHTS for Units as set forth below.

If you checked Box 2, please fill out the table shown below. Next, please check Box 3 and/or Box 4, as applicable, and fill out the information indicated under Box 3 and/or Box 4, as applicable. Please then sign and date this form and mail it to your broker, custodian bank or other nominee that holds your shares.

The number of Subscription Rights for which the undersigned gives instructions for exercise under the subscription privilege should not exceed the number of Subscription Rights that the undersigned is entitled to exercise.

	Number of Shares Owned		Initial Ratio		Number of Units Subscribed For		Per Unit Initial Subscription Price (the "Initial Price")		Payment
Basic Subscription Right:	_____	x	[•]	=	_____	x	\$7.01	=	\$_____ (Line 1)
Over-Subscription Right:					_____	x	\$7.01	=	\$_____ (Line 2)
Total Payment Required:									\$_____
									(Sum of Lines 1 and 2)

Box 3. Payment in the following amount is enclosed: \$_____.

Box 4. Please deduct payment of \$_____ from the following account maintained by you:

The total of Box 3 and 4, together, must equal the sum of lines 1 and 2 from Box 2 above.

Type of Account: _____ Account No.: _____

I (We) on my (our) behalf, or on behalf of any other person(s) on whose behalf, or under whose directions, I am (we are) signing this form:

- irrevocably elect to purchase the number of Units indicated above upon the terms and conditions specified in the Prospectus;
- understands that if the volume weighted average price of the Common Stock for the five trading day period through and including June 8, 2020 (the "Alternate Price") is lower than the Initial Price, any excess subscription amounts paid by me (us) will be put towards the purchase of additional Units in the rights offering (either towards my (our) Basic Subscription Right, if available, or towards the Over-Subscription Right if I (we) have already exercised my (our) Basic Subscription Right in full); and
- agree that if I (we) fail to pay for the Units I (we) have elected to purchase, you may exercise any remedies available to you under law.

Name of beneficial owner(s): _____

Signature of beneficial owner(s): _____

Date: _____

If you are signing in your capacity as a trustee, executor, administrator, guardian, attorney-in-fact, agent, officer of a corporation or another acting in a fiduciary or representative capacity, please provide the following information:

Name: _____

Capacity: _____

Address (including Zip Code): _____

Telephone Number: _____

PLEASE MAKE SURE THAT YOU USE THE CORRECT ADDRESS. You may want to check this address with your broker.