NovaBay Pharmaceuticals, Inc.
Form 424B5
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Registration No. 333-180460

The information contained in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated March 19, 2014.

PRELIMINARY PROSPECTUS SUPPLEMENT

(To the Prospectus Dated May 1, 2012)

Shares of Common Stock

Warrants to Purchase Shares of Common Stock

We are offering shares of our common stock. Each investor will also receive a warrant to purchase of a share of our common stock at any time on or before and at an exercise price of $ per share, for each share of common stock purchased. The common stock and warrants will be issued separately.

Our common stock is listed on the NYSE MKT under the symbol “NBY.” On March 18, 2014, the last reported sale price of our common stock was $1.25 per share. There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for the listing of the warrants on any national securities exchange or other nationally recognized trading system.

As of February 21, 2014, the aggregate market value of our outstanding common stock held by non-affiliates was approximately $54,777,298, based on 45,092,503 shares of outstanding common stock, of which approximately 40,575,777 shares are held by non-affiliates, and a per share price of $1.35, based on the closing sale price of our

common stock on February 21, 2014. As of the date hereof, we have offered $5,000,000 of our common stock pursuant to General Instruction I.B.6 of Form S-3 during the prior 12 calendar month period that ends on and includes the date hereof.

Investing in our securities involves significant risks. Before purchasing our common stock and warrants, please review the information, including information incorporated by reference, under the heading "Risk Factors" beginning on page S-4 of this prospectus supplement and page 6 of the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

	Per Share and Accompanying Warrant (1)	**Total**
Public offering price	$	$
Underwriting discounts and commissions (2)	$	$
Proceeds, before expenses, to us	$	$

The above summary of offering proceeds to us does not give effect to any exercise of the warrants being issued in this offering. We estimate the total expenses of this offering payable by us, excluding the underwriting discounts and commissions, will be approximately $.

We anticipate that delivery of the shares of our common stock and warrants will be made against payment therefor on or about March , 2014, subject to customary closing conditions.

(1) The public offering price is $ per share of common stock and $0.01 per warrant to purchase of a share of common stock.

(2) The underwriters will receive compensation in addition to the underwriting discount. See "Underwriting" beginning on page S-12 of this prospectus for a description of the compensation payable to the underwriters.

LAIDLAW & COMPANY (UK) LTD.

Prospectus supplement dated March , 2014.

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Prospectus Supplement

Prospectus

You should rely only on the information incorporated by reference or provided in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this

offering. Neither we nor the underwriters have authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction where it is unlawful to make such offer or solicitation. You should assume that the information contained in this prospectus supplement or the accompanying prospectus, or any document incorporated by reference in this prospectus supplement or the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the date of those respective documents. Neither the delivery of this prospectus supplement nor any distribution of securities pursuant to this prospectus supplement shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference into this prospectus supplement or in our affairs since the date of this prospectus supplement. Our business, financial condition, results of operations and prospects may have changed since that date.

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is part of a registration statement (No. 333-180460) that we filed with the Securities and Exchange Commission (the "SEC") using a "shelf" registration process. Under the registration statement, we registered the offering by us of common stock, preferred stock, debt securities and warrants for sale from time to time in one or more offerings. This prospectus supplement provides specific information about the offering by us of our common stock and accompanying warrants under the shelf registration statement. This document is in two parts. The first part is the prospectus supplement, which adds to and updates information contained in the accompanying prospectus. The second part, the prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus, on the other hand, you should rely on the information in this prospectus supplement.

Before purchasing any securities, you should carefully read both this prospectus supplement and the accompanying prospectus, together with the documents incorporated by reference herein as described under the heading "Incorporation of Certain Information by Reference" and the additional information described under the heading, "Where You Can Find More Information" in this prospectus supplement, as well as any free writing prospectus prepared by or on behalf of us or to which we have referred you.

We are offering to sell, and are seeking offers to buy, the shares and warrants only in jurisdictions where such offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the shares and warrants in certain jurisdictions or to certain persons within such jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about and observe any restrictions relating to the offering of the shares and warrants and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless the context otherwise requires, references in this prospectus supplement to "we", "us" and "our" refer to NovaBay Pharmaceuticals, Inc. and its consolidated subsidiaries.

This prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement and the accompanying prospectus, include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement and the accompanying prospectus, or any related free writing prospectus, are the

property of their respective owners.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about our company, this offering and information appearing elsewhere in this prospectus supplement, in the accompanying prospectus, in the documents we incorporate by reference and in any free writing prospectus that we have authorized for use in connection with this offering. This summary is not complete and does not contain all the information that you should consider before investing in our common stock and the accompanying warrants. You should read this entire prospectus supplement and the accompanying prospectus carefully, including the "Risk Factors" contained in this prospectus supplement, the accompanying prospectus and the financial documents and notes incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering, before making an investment decision. This prospectus supplement may add to, update or change information in the accompanying prospectus.

Overview

NovaBay Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company focused on addressing the unmet therapeutic needs of the global, topical anti-infective market with its two distinct categories of products, Aganocides® and NeutroPhase®.

Aganocide Compounds

NovaBay's first-in-class Aganocide compounds, led by auriclosene (NVC-422), are patented, synthetic molecules with a broad spectrum of activity against bacteria, viruses and fungi. Mimicking the mechanism of action that human white blood cells use against infections, Aganocides possess a reduced likelihood that bacteria or viruses will be able to develop resistance, which is critical for advanced anti-infectives. In recognition of NVC-422 first-in-class chemical structure and therapeutic characteristics, The World Health Organization (WHO) approved a new generic nomenclature by which NVC-422 would be universally identified. In February, 2013, NovaBay announced that WHO had approved *auriclosene* as the new International Non-Proprietary Name (INN) for NVC-422.

Having demonstrated therapeutic proof-of-concept, these compounds are well suited to treat and prevent a wide range of local, non-systemic infections. NovaBay is currently focusing its Aganocide compound into three large therapeutic markets:

Urology – Statistically-significant and clinically-meaningful results from a Phase 2 clinical study of Auriclosene Irrigation Solution to reduce urinary catheter blockage and encrustation (UCBE) were announced in September 2013. Study CL1001 achieved the study's primary endpoints and showed clear benefits for patients with long-term indwelling catheters.

Ophthalmology - NovaBay is developing an eye drop formulation of auriclosene (NVC-422) for treating adenoviral conjunctivitis, for which there is currently no FDA-approved treatment. The ongoing global clinical trial for auriclosene in conjunctivitis is expected to be completed in the middle of 2014. The company also initiated a proof-of-concept study for bacterial conjunctivitis in the second quarter of 2013 with the same auriclosene (NVC-422) formulation.

Dermatology - Partnered with Galderma, a leading dermatology company, we are developing a gel formulation of auriclosene (NVC-422) for treating impetigo, a highly contagious skin infection. In November 2013, NovaBay announced that the auriclosene Phase 2b clinical study of impetigo had been completed. While the study showed that auriclosene is safe and well tolerated, it did not meet its primary clinical endpoint. Knowledge gained from two previous impetigo studies is expected to lead to the use of an optimized formulation of auriclosene for an upcoming pilot study. The Company will be responsible the planning, execution and the cost of the upcoming study, which is expect to be approximately $1 to $2 million. Based on the results of this study NovaBay and Galderma will determine the next steps in the development of auriclosene for this indication.

NeutroPhase®

NovaBay has also developed NeutroPhase, a distinct class of molecule from the Aganocides. NeutroPhase is an FDA 510(k)-cleared Advanced Skin and Wound Cleanser. NeutroPhase is a patented pure hypochlorous acid solution which has the potential to be the best suited product on the market to treat the six-million patients in the U.S. who suffer from chronic non-healing wounds, such as pressure, venous stasis and diabetic ulcers.

NovaBay has developed variations of the NeutroPhase product such as i-Lid™ Cleanser (for use in ophthalmological applications) and CelleRx™ (for use in aesthetic dermatology). We expect both to be launched in selected markets in 2014.

NovaBay has begun securing commercial partnerships for NeutroPhase. In January 2012, NovaBay announced it had entered into an exclusive distribution agreement with Pioneer Pharma Holdings Limited. (HK: 1345) ("Pioneer"), a Shanghai-based company that markets high-end pharmaceutical products in the Asia Pacific region. Previously we had expanded the distribution agreement with Pioneer to include territories outside of China. The expanded agreement with Pioneer also includes licensing rights to the two new products variations, CelleRx™ and i-Lid™ Cleanser. The expanded partnership agreement covers the commercialization and distribution of these products in China and 11 countries in Southeast Asia. The expanded agreement with Pioneer also includes licensing rights to the two new products variations, CelleRx™ and i-Lid™ Cleanser. The expanded partnership agreement covers the commercialization and distribution of these products in China and 11 countries in Southeast Asia. In December 2013, Pioneer invested $5.7 million in NovaBay.

Company Information

We were incorporated under the laws of the State of California on January 19, 2000 as NovaCal Pharmaceuticals, Inc., and subsequently changed our name to NovaBay Pharmaceuticals, Inc. In June 2010, we changed the state in which we are incorporated, which we refer to as the Reincorporation, and are now incorporated under the laws of the State of Delaware.

Our corporate address is 5980 Horton Street, Suite 550, Emeryville, CA 94608, and our telephone number is (510) 899-8800. Our website address is *www.novabaypharma.com*. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus supplement or the accompanying prospectus, and you should not consider it part of this prospectus supplement or the accompanying prospectus. Our website address is included in this document as an inactive textual reference only.

Unless the context requires otherwise, all references in this report to “we,” “our,” “us,” the “Company,” “NovaBay” and “NovaBay Pharmaceuticals” refer to NovaBay Pharmaceuticals, Inc. and its subsidiaries, and with respect to NovaBay Pharmaceuticals, Inc. refer to the California corporation prior to the date of the Reincorporation, and to the Delaware corporation on and after the date of the Reincorporation.

The Offering

Common stock offered by us pursuant to this prospectus supplement	shares
Warrants offered	Warrants to purchase up to shares of common stock. The warrants will be exercisable during the period commencing on the date of original issuance and ending years from such issuance date at an exercise price of $ per share of common stock. The form of warrant is attached as Annex A to this prospectus supplement. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the warrants.
Common stock to be outstanding immediately after the offering	shares(1)
Use of proceeds	We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including research and development, clinical trials and selling, general and administrative expenses. See “Use of Proceeds” below.
NYSE MKT Symbol for our common stock	NBY
Risk factors	Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page S-4 of this prospectus supplement and page 6 of the accompanying prospectus.

(1) The number of shares of our common stock that will be issued and outstanding immediately after this offering as shown above is based on 44,624,498 shares of common stock issued and outstanding as of December 31, 2013, and excludes the following:

- shares of common stock issuable upon the exercise of stock options outstanding, of which there were 7,100,617 outstanding as of December 31, 2013, with a weighted average exercise price of $1.67 per share;
- shares of common stock issuable upon the vesting of outstanding restricted stock units, of which there were 62,950 outstanding as of December 31, 2013;

shares of common stock issuable upon the exercise of our outstanding warrants, of which there were warrants outstanding as of December 31, 2013, to purchase 1,225,000 shares of common stock at an exercise price of $2.75 per share, 3,465,505 shares of common stock at an exercise price of $1.33 per share, 30,000 shares of common stock at an exercise price of $2.50 per share, 30,000 shares of common stock at an exercise price of $3.75 per share, and 15,000 shares of common stock at an exercise price of $2.50 per share; and

39,163 common stock not subject to stock awards and reserved for issuance under our equity incentive plans.

RISK FACTORS

Any investment in our securities involves a high degree of risk, including the risks described below and in the section titled "Risk Factors" contained in our Annual Report on Form 10-K, or Annual Report, filed with the Securities and Exchange Commission, or the SEC, on March 6, 2014, which is incorporated by reference herein. Before purchasing our common stock and the accompanying warrants, you should carefully consider the risk factors set forth below and in our Annual Report as well as all other information contained in this prospectus supplement and the accompanying prospectus and incorporated by reference, including our consolidated financial statements in our Annual Report and any free writing prospectus that we have authorized for use in connection with this offering. The risks and uncertainties described below and in our Annual Report are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. If any of the risks described below or in our Annual Report actually occur, our business, financial condition and results of operations could suffer. As a result, the trading price of our stock could decline, perhaps significantly, and you could lose all or part of your investment. The risks discussed below and in our Annual Report also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements. See the section entitled "Forward-Looking Information."

Risks Relating to our Common Stock and this Offering

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. Our failure to apply these funds effectively could have a material adverse effect on our business, the commercialization of our product candidates and cause the price of our common stock to decline.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the sale of shares of common stock in this offering and warrants to purchase shares of common stock and the public offering price of $ per share and accompanying warrant, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $ per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock and accompanying warrants in this offering.

You may experience future dilution as a result of future equity offerings.

We expect that significant additional capital will be needed in the future to continue our planned operations. To raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. Additionally, you may incur dilution as a result of grants of equity awards under our equity incentive plans, or upon exercise of options or warrants currently outstanding with exercise prices at or below the public offering price of our common stock in this offering. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock and accompanying warrants in this offering.

Our share price may be volatile and there may not be an active trading market for our common stock.

There can be no assurance that the market price of our common stock will not decline below its present market price or that there will be an active trading market for our common stock. The market prices of biotechnology companies have been and are likely to continue to be highly volatile. Fluctuations in our operating results and general market conditions for biotechnology stocks could have a significant impact on the volatility of our common stock price. We have experienced significant volatility in the price of our common stock. From January 1, 2012, through March 18, 2014, the share price of our common stock has ranged from a high of $2.03 to a low of $0.76. Factors contributing to such volatility include, but are not limited to:

- results of preclinical studies and clinical trials;
- information relating to the safety or efficacy of products or product candidates;
- developments regarding regulatory filings;
- announcements of new collaborations;
- failure to enter into collaborations;
- developments in existing collaborations;
- our funding requirements and the terms of our financing arrangements;
- technological innovations or new indications for our therapeutic products and product candidates;
- introduction of new products or technologies by us or our competitors;
- sales and estimated or forecasted sales of products for which we receive royalties, if any;
- government regulations;

- developments in patent or other proprietary rights;

- the number of shares issued and outstanding;

- the number of shares trading on an average trading day;

- announcements regarding other participants in the biotechnology and pharmaceutical industries; and

- market speculation regarding any of the foregoing.

A substantial number of shares of our common stock may be sold in this offering, which could cause the price of our common stock to decline.

In this offering we will sell shares, or approximately % of our outstanding common stock as of December 31, 2013, together with warrants to purchase shares, or approximately % of our outstanding common stock as of December 31, 2013. This sale and any future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the price of our common stock. We cannot predict the effect, if any, that market sales of those shares of common stock or the availability of those shares of common stock for sale will have on the market price of our common stock.

There is no public market for the warrants to purchase shares of common stock being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange or other nationally recognized trading system, including the NYSE MKT. Without an active market, the liquidity of the warrants will be limited. The warrants in this offering will be issued in physical form.

The warrants are speculative in nature.

The warrants do not confer any rights of common stock ownership on its holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire shares of common stock at a fixed price for a limited period of time. Specifically, commencing on the date of issuance, holders of the warrants may exercise their right to acquire the common stock and pay an exercise price of $ per share, subject to certain adjustments, prior to years from the date of issuance, after which date any unexercised warrants will expire and have no further value. Moreover, following this offering, the market value of the warrants is uncertain and there can be no assurance that the market value of the warrants will equal or exceed their public offering price. The warrants will not be listed or quoted for trading on any market or exchange. There can be no assurance that the market price of the common stock will ever equal or exceed the exercise price of the warrants, and consequently, whether it will ever be profitable for holders of the warrants to exercise the warrants.

FORWARD-LOOKING INFORMATION

Certain statements contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference therein, related to the anticipated size of clinical trials, the anticipated timing of initiation of clinical trials, the expected availability of clinical trial results, the sufficiency of our cash resources, the estimated costs of clinical trials and the amounts of certain revenues and certain costs in comparison to prior years, or that otherwise relate to future periods, are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The words "believe," "may," "estimate," "continue," "anticipate," "intend," "expect," "predict," "potential" and similar expressions are in identify forward-looking statements. These statements are based on assumptions that may not prove accurate. Actual results could differ materially from those anticipated due to certain risks inherent in the biotechnology industry and for companies engaged in the development of new products in a regulated market. Among other things: we will need to raise additional capital, and we may not be able to do so on acceptable terms or at all; we are an early stage company with a history of losses and expect to incur net losses for the foreseeable future; we only have one marketable product in the USA, and if we are unable to develop and obtain regulatory approval for other products we may never generate significant product revenues; we will require substantial funds to continue development which may not be available; we are substantially dependent on Galderma for the development and commercialization of NVC-422 for treating impetigo; if our therapeutic product candidates do not receive regulatory approval, neither our third-party collaborators, our contract manufacturers nor we will be able to manufacture and market them; and we have limited experience in developing drugs and medical devices, and we may be unable to commercialize any of the products we develop. These and other risks, including those related to current economic and financial market conditions, are described in more detail in "Risk Factors" above and the additional risk factors contained in our most recent Annual Report on Form 10-K. We undertake no obligation to publicly update any forward-looking statements, regardless of any new information, future events or other occurrences. We advise you, however, to consult any additional disclosures we make in our reports to the SEC on Forms 10-K, 10-Q and 8-K.

USE OF PROCEEDS

We estimate the net proceeds from this offering will be approximately $, excluding the proceeds, if any, from the exercise of the warrants, after deducting underwriting discounts and commissions and our estimated offering expenses. We cannot predict when or if the warrants will be exercised, and it is possible that the warrans may expire and never be exercised.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including research and development, clinical trials and selling, general and administrative expenses. As a result, our management will retain broad discretion in the allocation and use of the net proceeds of this offering, and investors will be relying on the judgment of our management with regard to the use of these net proceeds. Pending application of the net proceeds for the purposes as described above, we expect to invest the net proceeds in short-term, interest-bearing securities, investment grade securities, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DILUTION

Our net tangible book value as of December 31, 2013, was approximately $8,515,984, or $0.19 per share of common stock. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of our shares of common stock outstanding as of December 31, 2013. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of common stock and accompanying warrants in this offering at the public offering price of $ per share and accompanying warrant, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the warrants issued pursuant to this offering, our as adjusted net tangible book value as of December 31, 2013, would have been approximately $, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and immediate dilution in net tangible book value of $ per share to new investors purchasing our shares of common stock in this offering. The following table illustrates this dilution on a per share basis:

Public offering price per share and accompanying warrant		$
Net tangible book value per share as of December 31, 2013	$0.19	
Increase per share attributable to investors participating in this offering	$	