Registration No. 333-156810

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

Post-effective Amendment No. 4 to Form S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

NAVIDEA BIOPHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

31-1080091 (I.R.S. Employer Identification Number)

425 Metro Place North, Suite 450
Dublin, Ohio 43017-1367
(614) 793-7500
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Brent L. Larson
Senior Vice President and Chief Financial Officer
Navidea Biopharmaceuticals, Inc.
425 Metro Place North, Suite 450
Dublin, Ohio 43017-1367
(614) 793-7500
(Name, address, including zip code, and telephone number,

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

Copies of Correspondence to:

William J. Kelly, Jr., Esq.
Brett P. Thornton, Esq.
Porter, Wright, Morris & Arthur LLP
41 South High Street, Suite 2800
Columbus, Ohio 43215-6194
(614) 227-2000
(614) 227-2100 (fax)
wjkelly@porterwright.com

Approximate date of commencement of proposed sale to the public: Not applicable.

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. \Box

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," and "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.						
Large accelerated filer □	Accelerated filer ⊠	Non-accelerated filer □ (Do not check if a smaller reporting company)	Smaller reporting company □			

EXPLANATORY NOTE

Deregistration of Securities

Navidea Biopharmaceuticals, Inc. (which we refer to as the "Company," "we," or "us") originally registered 11,500,000 shares of our common stock pursuant to a Registration Statement on Form S-1 (File No. 333-156810) filed January 20, 2009, as amended on September 18, 2009, and December 29, 2009, and as amended on Form S-3 on September 30, 2010, and subsequently declared effective by the Securities and Exchange Commission on October 4, 2010 (the "Registration Statement"), relating to the issuance of shares of our common stock in a transaction between us and Fusion Capital Fund II, LLC ("Fusion"), pursuant to the terms of the Common Stock Purchase Agreement, dated December 1, 2006, by and between Navidea Biopharmaceuticals, Inc. (formerly known as Neoprobe Corporation) and Fusion, as amended on December 24, 2008 (the "Purchase Agreement").

Pursuant to this Post-effective Amendment No. 4 to the Registration Statement, we are seeking to deregister the 1,956,788 shares of our common stock that were registered pursuant to the Registration Statement and not issued to Fusion Capital under the Purchase Agreement. Therefore, in accordance with our undertaking contained in Part II of the Registration Statement, which requires that we remove from registration by means of a post-effective amendment any securities originally registered by the Registration Statement that remained unsold at the termination of the offering, we hereby respectfully request that the Securities and Exchange Commission remove from registration those shares of common stock that were registered pursuant to the Registration Statement and remain unissued thereunder. The Registration Statement is hereby amended, as appropriate, to reflect the deregistration of such shares. As a result of this deregistration, no securities remain registered for sale pursuant to the Registration Statement.

Item 16. Exhibits

$\underline{Exhibit\ Number}\quad \underline{Exhibit\ Description}$

* 24.1 Power of Attorney

* Filed herewith.

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 post-effective amendment to registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Dublin, State of Ohio, on August 30, 2012.

NAVIDEA BIOPHARMACEUTICALS, INC.

/s/ Brent L. Larson

Brent L. Larson, Senior Vice President, Chief Financial Officer, Treasurer and Secretary

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
* Mark J. Pykett Mark J. Pykett, Ph.D.	President, Chief Executive Officer and Director (principal executive officer)	August 30, 2012
/s/ Brent L. Larson Brent L. Larson	Senior Vice President, Chief Financial Officer, Treasurer and Secretary (principal financial officer and principal accounting officer)	August 30, 2012
* Gordon A. Troup Gordon A. Troup	Chairman of the Board of Directors	August 30, 2012
* Peter F. Drake Peter F. Drake, Ph.D.	Director	August 30, 2012
* Brendan A. Ford Brendan A. Ford	Director	August 30, 2012
Jess E. Jones, M.D.	Director	
* Eric K. Rowinsky Eric K. Rowinsky, M.D.	Director	August 30, 2012
* By: /s/ Brent L. Larson Brent L. Larson, attorney-in-fact for each of the persons indicated		

POWER OF ATTORNEY

Each of the undersigned officers and directors of Navidea Biopharmaceuticals, Inc., a Delaware corporation (the "Company"), hereby appoints Mark J. Pykett and Brent L. Larson as his true and lawful attorneys-in-fact, or either of them, with power to act without the other, as his true and lawful attorney-in-fact, in his name and on his behalf, and in any and all capacities stated below, to sign, and to cause to be filed with the United States Securities and Exchange Commission (the "Commission"), the Company's Post-effective Amendment No. 4 to Registration Statement on Form S-3 (File No. 333-156810), including exhibits thereto and all documents in connection therewith, hereby granting unto such attorneys-in-fact, and to each of them, full power and authority to do and perform in the name of and on behalf of the undersigned, in any and all such capacities, every act and thing whatsoever necessary to be done in and about the premises as fully as the undersigned could or might do in person, hereby granting to each such attorney-in-fact full power of substitution and revocation, and hereby ratifying all that any such attorney-in-fact or his substitute may do by virtue hereof.

IN WITNESS WHEREOF, the undersigned have signed these presents as of the dates indicated.

<u>Signature</u> <u>Title</u>

/s/ Mark J. Pykett Mark J. Pykett, V.M.D., Ph.D.	President, Chief Executive Officer and Director	August 28, 2012
/s/ Gordon A. Troup Gordon A. Troup	Chairman of the Board of Directors	August 25, 2012
/s/ Peter F. Drake Peter F. Drake, Ph.D.	Director	August 29, 2012
/s/ Brendan A. Ford Brendan A. Ford	Director	August 28, 2012
Jess E. Jones, M.D.	Director	
/s/ Eric K. Rowinsky Eric K. Rowinsky, M.D.	Director	August 27, 2012