

**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,
including area code, of agent for service)

Copies of Correspondence to:

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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 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, 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 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.

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.

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

Exhibit Number Exhibit Description

* 24.1 Power of Attorney

* Filed herewith.
