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Navidea Biopharmaceuticals Completes Full Enrollment in Phase 2b Normative Database Study to Support its Rheumatoid Arthritis Program

DUBLIN, Ohio--(BUSINESS WIRE)-- Navidea Biopharmaceuticals, Inc. (NYSE American: NAVB) (“Navidea” or the “Company”), a company focused on the development of precision immunodiagnostic agents and immunotherapeutics, today announced that it has achieved full enrollment in its NAV3-35 Phase 2b clinical study titled “Development of a Normative Database for Rheumatoid Arthritis (RA) Imaging with Tc99m Tilmanocept.”

Establishing a healthy subject database is necessary to create a quantitative method for determining RA-involved inflammation in joints. The NAV3-35 Phase 2b clinical trial accomplishes this goal. The trial has two arms, with Arm 1 designed to acquire hand and wrist planar (two-dimensional) images from healthy subjects that were age and sex-matched to the RA population and injected with Tc99m tilmanocept. Arm 2 is a pilot feasibility study to examine the potential of three-dimensional SPECT/CT imaging of the hands and wrists of healthy subjects and patients with RA injected with Tc99m tilmanocept. The main objective of the trial is to complete the healthy subject (normative) database in support of the Company’s RA imaging commercial product development. A total of 120 healthy volunteers were enrolled in Arm 1. Enrollment is also finalized in Arm 2 of the study.

Tc99m tilmanocept attaches to mannose receptors (CD206) on macrophages that are frequently involved in RA joint inflammation. Relatively smaller numbers of CD206-expressing macrophages normally reside in the joints of healthy people without RA. An integral part of the ability to quantitatively discriminate RA-inflamed joints from those that do not have inflammation using Tc99m tilmanocept imaging is the knowledge of the distribution of Tc99m tilmanocept localization in healthy joints. The establishment of this database will enable improved accuracy of discrimination of RA-involved joints from non-RA inflamed joints and should have a positive impact on the ability to predict treatment response early, the primary indication the Company is pursuing in RA in the upcoming Phase 3 trial.

This database will also be used in the training of automated image analysis software to further improve the accuracy of the quantification of Tc99m tilmanocept localization in joints as well as the workflow for later commercialization in RA.

Dr. Michael Rosol, the Company’s Chief Medical Officer, said, “We are pleased to have reached this important milestone in our RA program pipeline. This healthy subject normative database will allow us to define the parameters of what a normal joint looks like with Tc99m tilmanocept, and with that information we can improve upon the quantitative determination of RA-inflamed joints.” Dr. Rosol continued, “This database will play an essential part in both

the Phase 3 data analysis as well as commercial product. It will not only enable us to more accurately quantitate RA-involved inflammation but, along with the proprietary algorithm we use to read the images, it will serve as an additional barrier to entry for possible long-term competition. This is a critical step forward in the advancement of our RA program into the upcoming Phase 3 trial."

About Navidea

Navidea Biopharmaceuticals, Inc. (NYSE American: NAVB) is a biopharmaceutical company focused on the development of precision immunodiagnostic agents and immunotherapeutics. Navidea is developing multiple precision-targeted products based on its Manocept™ platform to enhance patient care by identifying the sites and pathways of disease and enable better diagnostic accuracy, clinical decision-making, and targeted treatment. Navidea's Manocept platform is predicated on the ability to specifically target the CD206 mannose receptor expressed on activated macrophages. The Manocept platform serves as the molecular backbone of Tc99m tilmanocept, the first product developed and commercialized by Navidea based on the platform. Navidea's strategy is to deliver superior growth and shareholder return by bringing to market novel products and advancing the Company's pipeline through global partnering and commercialization efforts. For more information, please visit www.navidea.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. Forward-looking statements include our expectations regarding pending litigation and other matters. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: our history of operating losses and uncertainty of future profitability; the fact that the valuation by LifeSci Partners of our Tc99m tilmanocept pipeline product is subject to and based on numerous assumptions about the commercial success of the product, expected associated costs, and the outcome of various risks, including the outcome of clinical trials, that could affect the timetable for revenues, among other assumptions, that actual outcomes are likely to vary from such assumptions, resulting in variations from the possible results set forth in the valuation report; the final outcome of any pending litigation; our ability to successfully complete research and further development of our drug candidates; the timing, cost and uncertainty of obtaining regulatory approvals of our drug candidates; our ability to successfully commercialize our drug candidates; dependence on royalties and grant revenue; our ability to implement our growth strategy; anticipated trends in our business; our limited product line and distribution channels; advances in technologies and development of new competitive products; our ability to comply with the NYSE American continued listing standards; our ability to maintain effective internal control over financial reporting; the impact of the current coronavirus pandemic; and other risk factors detailed in our most recent Annual Report on Form 10-K and other SEC filings. You are urged to carefully review and consider the disclosures found in our SEC filings, which are available at http://www.sec.gov or at http://ir.navidea.com.

Investors are urged to consider statements that include the words "will," "may," "could,"

“should,” “plan,” “continue,” “designed,” “goal,” “forecast,” “future,” “believe,” “intend,” “expect,” “anticipate,” “estimate,” “project,” and similar expressions, as well as the negatives of those words or other comparable words, to be uncertain forward-looking statements.

You are cautioned not to place undue reliance on any forward-looking statements, any of which could turn out to be incorrect. We undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this report. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially from those anticipated or implied in the forward-looking statements.

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