NAVIDEA BIOPHARMACEUTICALS, INC.
Form 10-Q
November 09, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2016

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to to

Commission File Number: 001-35076

NAVIDEA BIOPHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	31-1080091
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

5600 Blazer Parkway, Suite 200, Dublin, Ohio	43017-7550
(Address of principal executive offices)	(Zip Code)

(614) 793-7500

(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12-b-2 of the Act.) Yes No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: 155,762,729 shares of common stock, par value $.001 per share (as of the close of business on November 1, 2016).

NAVIDEA BIOPHARMACEUTICALS, INC. AND SUBSIDIARIES

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

Navidea Biopharmaceuticals, Inc. and Subsidiaries

Consolidated Balance Sheets

	September 30, 2016 (unaudited)	December 31, 2015
ASSETS		
Current assets:		
Cash	$810,425	$7,166,260
Restricted cash	3,501,247	—
Accounts and other receivables	3,474,329	3,703,186
Inventory, net	804,882	652,906
Prepaid expenses and other	839,978	1,054,822
Total current assets	9,430,861	12,577,174
Property and equipment	3,584,628	3,871,035
Less accumulated depreciation and amortization	2,210,554	1,943,427
	1,374,074	1,927,608
Patents and trademarks	222,590	233,596
Less accumulated amortization	41,604	47,438
	180,986	186,158
Other assets	203,679	273,573
Total assets	$11,189,600	$14,964,513
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$4,894,800	$1,767,523
Accrued liabilities and other	7,201,793	3,038,713
Deferred revenue, current	15,037	1,044,281
Notes payable, current	51,652,209	333,333
Total current liabilities	63,763,839	6,183,850
Deferred revenue	26,061	192,728
Notes payable, net of discounts of $0 and $2,033,506, respectively	10,549,405	60,746,002
Other liabilities	624,896	1,677,633
Total liabilities	74,964,201	68,800,213
Commitments and contingencies		
Stockholders' deficit:		
Preferred stock; $.001 par value; 5,000,000 shares authorized; no shares issued or outstanding at September 30, 2016 and December 31, 2015, respectively	—	—

Common stock; $.001 par value; 300,000,000 shares authorized, 155,751,316 issued and outstanding at September 30, 2016; 200,000,000 shares authorized, 155,649,665 shares issued and outstanding at December 31, 2015, respectively	155,751	155,650
Additional paid-in capital	326,573,833	326,085,743
Accumulated deficit	(390,973,227)	(380,546,651)
Total Navidea stockholders' deficit	(64,243,643)	(54,305,258)
Noncontrolling interest	469,042	469,558
Total stockholders’ deficit	(63,774,601)	(53,835,700)
Total liabilities and stockholders’ deficit	$11,189,600	$14,964,513

See accompanying notes to consolidated financial statements (unaudited).

Navidea Biopharmaceuticals, Inc. and Subsidiaries

Consolidated Statements of Operations

(unaudited)

	Three Months Ended		Nine Months Ended	
	September 30, 2016	2015	September 30, 2016	2015
Revenue:				
Lymphoseek sales revenue	$6,690,090	$2,952,522	$14,704,489	$6,751,492
Lymphoseek license revenue	1,295,625	550,000	1,795,625	883,333
Grant and other revenue	511,359	476,755	2,113,995	1,320,816
Total revenue	8,497,074	3,979,277	18,614,109	8,955,641
Cost of goods sold	921,817	457,590	2,017,486	1,239,377
Gross profit	7,575,257	3,521,687	16,596,623	7,716,264
Operating expenses:				
Research and development	1,276,053	3,902,155	6,461,154	10,180,517
Selling, general and administrative	2,940,773	3,942,609	9,925,574	13,485,576
Total operating expenses	4,216,826	7,844,764	16,386,728	23,666,093
Income (loss) from operations	3,358,431	(4,323,077)	209,895	(15,949,829)
Other income (expense):				
Interest expense, net	(2,566,171)	(2,148,369)	(12,288,169)	(4,690,686)
Equity in loss of R-NAV, LLC	—	(26,785)	(15,159)	(295,217)
Loss on disposal of investment in R-NAV, LLC	—	—	(39,732)	—
Change in fair value of financial instruments	(839,298)	(1,577,275)	1,755,989	(1,702,902)
Loss on extinguishment of debt	—	—	—	(2,440,714)
Other, net	(12,498)	4,402	(49,916)	26,100
Total other expense, net	(3,417,967)	(3,748,027)	(10,636,987)	(9,103,419)
Net loss	(59,536)	(8,071,104)	(10,427,092)	(25,053,248)
Less loss attributable to noncontrolling interest	(159)	(340)	(516)	(681)
Deemed dividend on beneficial conversion feature of MT Preferred Stock	—	—	—	(46,000)
Net loss attributable to common stockholders	$(59,377)	$(8,070,764)	$(10,426,576)	$(25,098,567)
Loss per common share (basic and diluted)	$(0.00)	$(0.05)	$(0.07)	$(0.17)
Weighted average shares outstanding (basic and diluted)	155,481,278	150,186,131	155,390,911	150,030,638

See accompanying notes to consolidated financial statements (unaudited).

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Navidea Biopharmaceuticals, Inc. and Subsidiaries

Consolidated Statement of Stockholders' Deficit

(unaudited)

	Preferred Stock Shares	Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Non-controlling Interest	Total Stockholders' Deficit
Balance, December 31, 2015	—	$ —	155,649,665	$155,650	$326,085,743	$(380,546,651)	$ 469,558	$(53,835,700)
Issued restricted stock	—	—	168,000	168	—	—	—	168
Canceled forfeited restricted stock	—	—	(206,000)	(206)	178	—	—	(28)
Issued stock in payment of Board retainers	—	—	72,649	72	56,537	—	—	56,609
Issued stock to 401(k) plan	—	—	67,002	67	120,733	—	—	120,800
Stock compensation expense	—	—	—	—	310,642	—	—	310,642
Net loss	—	—	—	—	—	(10,426,576)	(516)	(10,427,092)
Balance, September 30, 2016	—	$ —	155,751,316	$155,751	$326,573,833	$(390,973,227)	$ 469,042	$(63,774,601)

See accompanying notes to consolidated financial statements (unaudited).

Navidea Biopharmaceuticals, Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(unaudited)

	Nine Months Ended September 30,	
	2016	2015
Cash flows from operating activities:		
Net loss	$(10,427,092)	$(25,053,248)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	378,834	431,368
Loss on disposal and abandonment of assets	136,719	33,184
Gain on forgiveness of accounts payable	(85,355)	—
Change in reserve for uncollectable accounts	—	16,000
Change in inventory reserve	43,354	138,914
Amortization of debt discount and issuance costs	77,964	423,522
Debt discount and issuance costs written off	1,955,541	—
Prepayment premium and debt collection fees related to long term debt	2,923,271	—
Compounded interest on long term debt	1,367,259	1,231,125
Stock compensation expense	310,642	1,916,179
Equity in loss of R-NAV, LLC	15,159	295,217
Loss on disposal of investment in R-NAV, LLC	39,732	—
Change in fair value of financial instruments	(1,755,989)	1,702,902
Loss on extinguishment of debt	—	2,440,714
Issued stock to 401(k) plan for employer matching contributions	120,800	117,099
Extension of warrant expiration date	—	149,615
Issued warrants in connection with advisory services agreement	—	256,450
Value of restricted stock issued to directors	56,609	131,262
Other	(15,159)	(53,642)
Changes in operating assets and liabilities:		
Accounts receivable	210,536	(1,108,828)
Inventory	(195,330)	(83,712)
Prepaid expenses and other assets	11,465	588,996
Accounts payable	3,212,632	(178,620)
Accrued and other liabilities	4,113,403	305,170
Deferred revenue	(1,195,911)	1,419,198
Net cash provided by (used in) operating activities	1,299,084	(14,881,135)
Cash flows from investing activities:		
Purchases of equipment	(1,847)	(30,406)
Proceeds from sales of equipment	45,000	38,265
Patent and trademark costs	—	(27,092)
Payments on disposal of investment in R-NAV, LLC	(110,000)	—
Proceeds from disposal of investment in R-NAV, LLC	27,623	—
Net cash used in investing activities	(39,224)	(19,233)

Cash flows from financing activities:		
Proceeds from issuance of MT Preferred Stock and warrants	—	500,000
Payment of preferred stock issuance costs	—	(12,587)
Proceeds from issuance of common stock, net	140	65,975
Payment of tax withholdings related to stock-based compensation	—	(23,906)
Proceeds from notes payable	—	54,500,000
Payment of debt-related costs	(3,923,271)	(3,902,487)
Principal payments on notes payable	(189,163)	(30,333,333)
Restricted cash held for payment against debt	(3,501,247)	—
Payments under capital leases	(2,154)	(1,880)
Net cash (used in) provided by financing activities	(7,615,695)	20,791,782
Net (decrease) increase in cash	(6,355,835)	5,891,414
Cash, beginning of period	7,166,260	5,479,006
Cash, end of period	$810,425	$11,370,420

See accompanying notes to consolidated financial statements (unaudited).

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Notes to the Consolidated Financial Statements (unaudited)

1. Summary of Significant Accounting Policies

a. Basis of Presentation: The information presented as of September 30, 2016 and for the three-month and nine-month periods ended September 30, 2016 and 2015 is unaudited, but includes all adjustments (which consist only of normal recurring adjustments) that the management of Navidea Biopharmaceuticals, Inc. (Navidea, the Company, or we) believes to be necessary for the fair presentation of results for the periods presented. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to the rules and regulations of the U.S. Securities and Exchange Commission. The balances as of September 30, 2016 and the results for the interim periods are not necessarily indicative of results to be expected for the year. The consolidated financial statements should be read in conjunction with Navidea's audited consolidated financial statements for the year ended December 31, 2015, which were included as part of our Annual Report on Form 10-K.

Our consolidated financial statements include the accounts of Navidea and our wholly owned subsidiaries, Navidea Biopharmaceuticals Limited and Cardiosonix Ltd, as well as those of our majority-owned subsidiary, Macrophage Therapeutics, Inc. (MT). All significant inter-company accounts were eliminated in consolidation. Prior to termination of Navidea's joint venture with R-NAV, LLC (R-NAV), Navidea's investment in R-NAV was being accounted for using the equity method of accounting and was therefore not consolidated. See Note 8.

b. Financial Instruments and Fair Value: In accordance with current accounting standards, the fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value, giving the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1 – Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 – Quoted prices in markets that are not active or financial instruments for which all significant inputs are observable, either directly or indirectly; and

Level 3 – Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. In determining the appropriate levels, we perform a detailed analysis of the assets and liabilities whose fair value is measured on a recurring basis. At each reporting period, all assets and liabilities for which the fair value measurement is based on significant unobservable inputs or instruments which trade infrequently and therefore have little or no price transparency are classified as Level 3. See Note 3.

The following methods and assumptions were used to estimate the fair value of each class of financial instruments:

(1) Cash, restricted cash, accounts and other receivables, accounts payable, and accrued liabilities: The carrying amounts approximate fair value because of the short maturity of these instruments. At September 30, 2016, restricted cash represents the balance in an account that is under the control of Capital Royalty Partners II L.P. (CRG). See Note 10. At September 30, 2016, approximately $894,000 of accounts payable was being disputed

by the Company related to unauthorized expenditures by a former executive.

(2) Notes payable: The carrying value of our debt at September 30, 2016 and December 31, 2015 primarily consists of the face amount of the notes less unamortized discounts. See Note 9. At September 30, 2016 and December 31, 2015, certain notes payable were also required to be recorded at fair value. The estimated fair value of our debt was calculated using a discounted cash flow analysis as well as a Monte Carlo simulation. These valuation methods include Level 3 inputs such as the estimated current market interest rate for similar instruments with similar creditworthiness. Unrealized gains and losses on the fair value of the debt are classified in other expenses as a change in the fair value of financial instruments in the consolidated statements of operations. At September 30, 2016, the fair value of our notes payable is approximately $62.2 million, equal to the carrying value of $62.2 million.

(3) Derivative liabilities: Derivative liabilities are related to certain outstanding warrants which are recorded at fair value. Derivative liabilities totaling $63,000 as of September 30, 2016 and December 31, 2015 were included in other liabilities on the consolidated balance sheets. The assumptions used to calculate fair value as of September 30, 2016 and December 31, 2015 included volatility, a risk-free rate and expected dividends. In addition, we considered non-performance risk and determined that such risk is minimal. Unrealized gains and losses on the derivatives are classified in other expenses as a change in the fair value of financial instruments in the statements of operations. See Note 3.

c. Revenue Recognition: We currently generate revenue primarily from sales of Lymphoseek® (technetium Tc 99m tilmanocept) injection. Our standard shipping terms are free on board (FOB) shipping point, and title and risk of loss passes to the customer upon delivery to a carrier for shipment. We generally recognize sales revenue related to sales of our products when the products are shipped. Our customers have no right to return products purchased in the ordinary course of business, however, we may allow returns in certain circumstances based on specific agreements.

We earn additional revenues based on a percentage of the actual net revenues achieved by Cardinal Health on sales to end customers made during each fiscal year. The amount we charge Cardinal Health related to end customer sales of Lymphoseek are subject to a retroactive annual adjustment. To the extent that we can reasonably estimate the end-customer prices received by Cardinal Health, we record sales based upon these estimates at the time of sale. If we are unable to reasonably estimate end customer sales prices related to products sold, we record revenue related to these product sales at the minimum (i.e., floor) price provided for under our distribution agreement with Cardinal Health.

During the nine-month periods ended September 30, 2016 and 2015, over 99% of Lymphoseek sales were made to Cardinal Health. As of September 30, 2016, approximately 81% of accounts and other receivables were due from Cardinal Health.

We also earn revenues related to our licensing and distribution agreements. The terms of these agreements may include payment to us of non-refundable upfront license fees, funding or reimbursement of research and development efforts, milestone payments if specified objectives are achieved, and/or royalties on product sales. We evaluate all deliverables within an arrangement to determine whether or not they provide value on a stand-alone basis. We recognize a contingent milestone payment as revenue in its entirety upon our achievement of a substantive milestone if the consideration earned from the achievement of the milestone (i) is consistent with performance required to achieve the milestone or the increase in value to the delivered item, (ii) relates solely to past performance and (iii) is reasonable relative to all of the other deliverables and payments within the arrangement. We received a non-refundable upfront cash payment of $2.0 million from SpePharm AG upon execution of the SpePharm License Agreement in March 2015. We have determined that the license and other non-contingent deliverables do not have stand-alone value because the license could not be deemed to be fully delivered for its intended purpose unless we perform our other obligations, including specified development work. Accordingly, they do not meet the separation criteria, resulting in these deliverables being considered a single unit of account. As a result, revenue relating to the upfront cash payment was deferred and was being recognized on a straight-line basis over the estimated obligation period of two years. However, the remaining deferred revenue of $417,000 was recognized upon obtaining European approval of a reduced-mass vial in September 2016, several months earlier than originally anticipated.

We generate additional revenue from grants to support various product development initiatives. We generally recognize grant revenue when expenses reimbursable under the grants have been paid and payments under the grants become contractually due. Lastly, we recognized revenues from the provision of services to R-NAV and its subsidiaries through the termination of the R-NAV joint venture on May 31, 2016. See Note 8.

d. Recent Accounting Standards: In August 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-15, Presentation of Financial Statements-Going Concern. ASU 2014-15 defines when and how companies are required to disclose going concern uncertainties, which must be evaluated each interim and annual period. ASU 2014-15 requires management to determine whether substantial doubt exists regarding the entity's going concern presumption. Substantial doubt about an entity's ability to continue as a going concern exists when relevant conditions and events, considered in the aggregate, indicate that it is probable that the entity will be unable to meet its obligations as they become due within one year after the date that the financial statements are issued (or available to be issued). If substantial doubt exists, certain disclosures are required; the extent of those disclosures depends on an evaluation of management's plans (if any) to mitigate

the going concern uncertainty. ASU 2014-15 is effective prospectively for annual periods ending after December 15, 2016, and to annual and interim periods thereafter. Early adoption is permitted. We do not expect the adoption of ASU 2014-15 to have a material effect on our consolidated financial statements, however it may affect our disclosures.

In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers – Principal versus Agent Considerations (Reporting Revenue Gross versus Net). ASU 2016-08 does not change the core principle of the guidance, rather it clarifies the implementation guidance on principal versus agent considerations. ASU 2016-08 clarifies the guidance in ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), which is not yet effective. The effective date and transition requirements for ASU 2016-08 are the same as for ASU 2014-09, which was deferred by one year by ASU No. 2015-14, Revenue from Contracts with Customers – Deferral of the Effective Date. Public business entities should adopt the new revenue recognition standard for annual reporting periods beginning after December 15, 2017, including interim periods within that year. Early adoption is permitted only as of annual reporting periods beginning after December 15, 2016, including interim periods within that year. We are currently evaluating the potential impact that the adoption of ASU 2014-09 may have on our consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation. ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Some of the simplified areas apply only to nonpublic entities. ASU 2016-09 is effective for public business entities for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted in any interim or annual period. If an entity early adopts ASU 2016-09 in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. Methods of adoption vary according to each of the amendment provisions. We are currently evaluating the potential impact that the adoption of ASU 2016-09 may have on our consolidated financial statements.

In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers – Identifying Performance Obligations and Licensing. ASU 2016-10 does not change the core principle of the guidance, rather it clarifies the identification of performance obligations and the licensing implementation guidance, while retaining the related principles for those areas. ASU 2016-10 clarifies the guidance in ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), which is not yet effective. The effective date and transition requirements for ASU 2016-10 are the same as for ASU 2014-09, which was deferred by one year by ASU No. 2015-14, Revenue from Contracts with Customers – Deferral of the Effective Date. Public business entities should adopt the new revenue recognition standard for annual reporting periods beginning after December 15, 2017, including interim periods within that year. Early adoption is permitted only as of annual reporting periods beginning after December 15, 2016, including interim periods within that year. We are currently evaluating the potential impact that the adoption of ASU 2014-09 may have on our consolidated financial statements.

In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers – Narrow-Scope Improvements and Practical Expedients. ASU 2016-12 does not change the core principle of the guidance, rather it affects only certain narrow aspects of Topic 606, including assessing collectability, presentation of sales taxes, noncash consideration, and completed contracts and contract modifications at transition. ASU 2016-12 affects the guidance in ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), which is not yet effective. The effective date and transition requirements for ASU 2016-12 are the same as for ASU 2014-09, which was deferred by one year by ASU No. 2015-14, Revenue from Contracts with Customers – Deferral of the Effective Date. Public business entities should adopt the new revenue recognition standard for annual reporting periods beginning after December 15, 2017, including interim periods within that year. Early adoption is permitted only as of annual reporting periods beginning after December 15, 2016, including interim periods within that year. We are currently evaluating the potential impact that the adoption of ASU 2014-09 may have on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 addresses certain specific cash flow issues with the objective of reducing the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement cash flows. ASU 2016-15 is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted in any interim or annual period. If an entity early adopts ASU 2016-15 in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. ASU 2016-15 should be applied using a retrospective transition method to each period presented, with certain exceptions. We adopted ASU 2016-15 upon issuance, which resulted in debt prepayment costs being classified as financing costs rather than operating costs on the statement of cash flows.

e. Reclassifications: Certain reclassifications have been made to the prior year's financial statements to conform to the 2016 presentation. The reclassifications relate to the presentation of the consolidated statements of cash flows and do not change the consolidated balance sheets, statements of operations, or net cash used in operating activities.

2. Liquidity

All of our material assets, except our intellectual property, have been pledged as collateral for our borrowings under the Term Loan Agreement (the CRG Loan Agreement) with CRG. In addition to the security interest in our assets, the CRG Loan Agreement carries covenants that impose significant requirements on us, including, among others, requirements that we (1) pay all principal, interest and other charges on the outstanding balance of the borrowed funds when due; (2) maintain liquidity of at least $5 million during the term of the CRG Loan Agreement; and (3) meet certain annual EBITDA or revenue targets ($22.5 million of Lymphoseek sales revenue in 2016) as defined in the CRG Loan Agreement. The events of default under the CRG Loan Agreement also include a failure of Platinum-Montaur Life Sciences LLC, an affiliate of Platinum Management (NY) LLC, Platinum Partners Value Arbitrage Fund L.P., Platinum Partners Liquid Opportunity Master Fund L.P., Platinum Liquid Opportunity Management (NY) LLC, and Montsant Partners LLC (collectively, Platinum) to perform its funding obligations under the Platinum Loan Agreement (as defined below) at any time as to which the Company had negative EBITDA for the most recent fiscal quarter, as a result either of Platinum's repudiation of its obligations under the Platinum Loan Agreement, or

the occurrence of an insolvency event with respect to Platinum. An event of default would entitle CRG to accelerate the maturity of our indebtedness, increase the interest rate from 14% to the default rate of 18% per annum, and invoke other remedies available to it under the loan agreement and the related security agreement.

During the second quarter of 2016, CRG alleged multiple claims of default on the CRG Loan Agreement, and filed suit in the District Court of Harris County, Texas. On June 22, 2016, CRG exercised control over one of the Company's primary bank accounts and took possession of $4.1 million that was on deposit, applying $3.9 million of the cash to various fees, including collection fees, a prepayment premium and an end-of-term fee. The remaining $189,000 was applied to the principal balance of the debt.

On July 13, 2016, a hearing was held in the District Court of Harris County, Texas with respect to an application for temporary injunction (ATI) filed by CRG in June 2016. At the conclusion of the hearing, the Court ordered the parties to mediation and stayed any ruling on CRG's request for injunctive relief until after a mediation has been completed. On July 20, the parties participated in mediation but were not successful in reaching an agreement. On July 29, 2016, the Harris County, Texas judge recused herself from the case, citing inability to be impartial. A new judge was appointed on July 29, 2016.

On August 30, 2016, the District Court of Harris County, Texas granted CRG's ATI. The Court provided the Company with 21 days to enter into the requisite account control agreements with CRG. In September 2016, the ATI was superseded by the requirement to maintain $2.5 million in a pledged collateral account that is subject to an account control agreement. The Order granting the ATI is currently on appeal to the Fourteenth Court of Appeals. Briefing is expected to be completed by early December 2016, after which a date will be set for oral arguments.

Discovery is ongoing in the Texas court action; the discovery period ends June 23, 2017. CRG filed an objection to the supersedeas that was heard on October 31, 2016, during which the court ruled that an additional $500,000 should be placed in the pledged collateral account within ten days of the ruling. In addition, CRG has filed a motion for partial summary judgment that currently is set for hearing on December 12, 2016. The Company is preparing responses to the motion for partial summary judgment. The trial date is currently set for July 3, 2017.

In June 2016, CRG contacted our primary distribution partner, Cardinal Health, and demanded that Cardinal Health make all future payments for Lymphoseek sales directly to CRG, rather than to Navidea. Cardinal Health filed an interpleader in the Franklin County, Ohio Court of Common Pleas, requesting that the court make a determination as to whom Cardinal Health should make such payments. Rulings on June 28, 2016 and August 1, 2016 resulted in $1.0 million of Cardinal Health payments being placed in escrow with the court, with the remaining Cardinal Health payments going directly to the Company.

In October 2016, a revised temporary restraining order was issued, allowing the Company to receive 100% of the receivables due from Cardinal Health, with an additional $1.0 million deposited in the pledged collateral account by the Company as a bond. Further, the court ruled that the Company remain current on its quarterly interest payments to CRG. On October 7, 2016 the Company paid $1.3 million to CRG to cover the third quarter 2016 interest payment. The $1.0 million previously deposited by Navidea in the Court's registry as a bond will also be transferred to the pledged collateral account. CRG has filed a motion to dismiss the Company's cross-claims in Cardinal Health's Franklin County, Ohio interpleader action. The Company is in the process of responding to CRG's motion to dismiss.

As of September 30, 2016, the Company's unrestricted cash balance was $810,000, with $3.5 million restricted cash in the pledged collateral and court escrow accounts.

The Company maintains that CRG's allegations of multiple events of default under the CRG Loan Agreement are without merit and the Company believes it has defenses against these claims. Furthermore, the Company believes that CRG's actions constitute a material breach of the CRG Loan Agreement and therefore, the Company is no longer subject to certain provisions of the CRG Loan Agreement. The Company believes that its best course of action is to pay off or refinance the CRG debt and pursue its claims for damages. The Company is continuing to explore alternative financing arrangements, including the Proposed Transaction with Cardinal Health discussed below, in order to pay off or refinance the CRG debt. There can be no assurance that CRG will not prevail in exercising control over any additional banking arrangements that the Company creates, that the Company will be able to pay off or refinance the CRG debt or that the Company will be successful in its claims for damages. In light of current circumstances, the ability of the Company to continue as a going concern is in substantial doubt and dependent upon its ability to generate sufficient cash flow to sustain its operations on a timely basis, to obtain additional financing as may be required, and to refinance the CRG debt. See Notes 9 and 10.

In addition, our Loan Agreement with Platinum (the Platinum Loan Agreement) carries standard non-financial covenants typical for commercial loan agreements, many of which are similar to those contained in the CRG Loan Agreement, that impose significant requirements on us. Our ability to comply with these provisions may be affected by changes in our business condition or results of our operations, or other events beyond our control. The breach of any of these covenants would result in a default under the Platinum Loan Agreement, permitting Platinum to terminate our ability to obtain additional draws under the Platinum Loan Agreement and accelerate the maturity of the debt, subject to the limitations of the Subordination Agreement

with CRG. Such actions by Platinum could materially adversely affect our operations, results of operations and financial condition, including causing us to substantially curtail our product development activities.

The Platinum Loan Agreement includes a covenant that results in an event of default on the Platinum Loan Agreement upon default on the CRG Loan Agreement. As discussed above, the Company is maintaining its position that CRG's alleged claims do not constitute events of default under the CRG Loan Agreement and believes it has defenses against such claims. The Company has obtained a waiver from Platinum confirming that we are not in default under the Platinum Loan Agreement as a result of the alleged default on the CRG Loan Agreement and as such, we are currently in compliance with all covenants under the Platinum Loan Agreement.

As of September 30, 2016, the outstanding principal balance of the Platinum Note was approximately $9.3 million, with $27.3 million currently available under the credit facility. An additional $15 million is potentially available under the credit facility on terms to be negotiated. However, based on Platinum's recent filing for Chapter 15 bankruptcy protection, Navidea has substantial doubt about Platinum's ability to fund future draw requests under the credit facility. The inability to access credit under the Platinum Loan Agreement or other potentially available arrangements could materially adversely affect our operations and financial condition and our ability to continue as a going concern. See Note 9.

On September 5, 2016, the Company entered into a non-binding letter of intent (LOI) with Cardinal Health pursuant to which Cardinal Health intends to acquire the Company's Lymphoseek product (the Product) and certain intellectual property rights and other assets related to the Product (the Acquired Assets) and assume certain liabilities associated with the Acquired Assets (the Proposed Transaction). The purchase price for the Proposed Transaction shall consist of (i) $80 million in cash payable at closing (reduced to the extent the amount of transferred Product inventory is less than $6 million), plus (ii) annual earn-out and milestone payments based upon the volume of Product sales. For the first three years, the earn-out payments shall be no less than $6.7 million per year. In no event will the entire purchase price, including all earn-out payments, exceed $310 million.

As part of the Proposed Transaction, the parties have agreed that simultaneous with the closing, subject to certain conditions, Cardinal Health will license to the Company (License Back), on a perpetual royalty free basis, certain rights to the Acquired Assets necessary for the Company to (i) develop, manufacture, market, sell and distribute new pharmaceutical and other products on an exclusive basis so long as such products do not compete with the Product, and (ii) manufacture, market, sell and distribute the Product throughout the world other than in North America on a non-exclusive basis.

Also as part of the Proposed Transaction, the Company shall grant to Cardinal Health five (5) year warrants to purchase up to 10 million shares of the Company's common stock, par value $.001 per share, at an exercise price of $1.50 per share and provide Cardinal Health with a right of first offer related to the assets covered by the License Back and new products developed by the Company in certain circumstances during the life of the Product's patents.

The parties intend to negotiate and execute definitive agreements for the Proposed Transaction with customary provisions for a transaction of this size and scope, including representations and warranties regarding the Company, its business, and the Acquired Assets, indemnification of Cardinal Health by the Company, covenants and closing conditions. The closing of the Proposed Transaction is subject to, among other things, the satisfactory completion of due diligence by Cardinal Health and approval of the Company's stockholders.

Unless written notice is given to the Company that Cardinal Health is ceasing further discussions related to the Proposed Transaction, the Company has agreed not to initiate or enter into any discussions with any third party regarding a possible sale of any equity or material assets of the Company or its subsidiaries for a period of thirty days from the date of the LOI. If the Company does not consummate a transaction with Cardinal Health as contemplated

by the LOI and at any time within 180 days of the date of the LOI consummates one or more transactions that, directly or indirectly, result in a sale, license or other transfer of the Product, or all or substantially all of the Company's assets, then a certain Supply and Distribution Agreement between the Company and Cardinal Health shall automatically be extended for an additional three-year period. The parties have agreed that the provisions described in this paragraph shall be binding.

The Company intends to use the majority of the initial proceeds from the Proposed Transaction to pay off the loans to CRG and Platinum, and use the remainder to fund operations in the near term. If the Proposed Transaction closes, it will significantly improve our financial condition and our ability to continue as a going concern.

3. Fair Value

Platinum has the right to convert all or any portion of the unpaid principal or unpaid interest accrued on all draws under the Platinum credit facility, under certain circumstances. Platinum's debt instrument, including the embedded option to convert such debt into common stock, is recorded at fair value on the consolidated balance sheets. The estimated fair value of the Platinum notes payable is $10.5 million at September 30, 2016.

MT issued warrants to purchase MT Common Stock with certain characteristics including a net settlement provision that require the warrants to be accounted for as a derivative liability at fair value on the consolidated balance sheets. The estimated fair value of the MT warrants is $63,000 at September 30, 2016, and will continue to be measured on a recurring basis. See Note 1(b)(3).

The following tables set forth, by level, financial liabilities measured at fair value on a recurring basis:

Liabilities Measured at Fair Value on a Recurring Basis as of September 30, 2016

Description	Quoted Prices in Active Markets for Identical Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Platinum notes payable conversion option	$ —	$ —	$ 1,255,891	$1,255,891
Liability related to MT warrants	—	—	63,000	63,000

Liabilities Measured at Fair Value on a Recurring Basis as of December 31, 2015

Description	Quoted Prices in Active Markets for Identical Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Platinum notes payable conversion option	$ —	$ —	$ 3,011,880	$3,011,880
Liability related to MT warrants	—	—	63,000	63,000

a. Valuation Processes-Level 3 Measurements: The Company utilizes third-party valuation services that use complex models such as Monte Carlo simulation to estimate the value of our financial liabilities. Each reporting period, the Company provides significant unobservable inputs to the third-party valuation experts based on current internal estimates and forecasts.

b. Sensitivity Analysis-Level 3 Measurements: Changes in the Company's current internal estimates and forecasts are likely to cause material changes in the fair value of certain liabilities. The significant unobservable inputs used in the fair value measurement of the liabilities include the amount and timing of future draws expected to be taken under the Platinum Loan Agreement based on current internal forecasts and management's estimate of the likelihood of actually making those draws as opposed to obtaining other sources of financing. Significant increases (decreases) in any of the significant unobservable inputs would result in a higher (lower) fair value measurement. A change in one of the inputs would not necessarily result in a directionally similar change in the others.

There were no Level 1 or Level 2 liabilities outstanding at any time during the nine-month periods ended September 30, 2016 and 2015. There were no transfers in or out of Level 1 or Level 2 liabilities during the

nine-month periods ended September 30, 2016 and 2015. Changes in the estimated fair value of our Level 3 liabilities relating to unrealized gains (losses) are recorded as changes in fair value of financial instruments in the consolidated statements of operations. The change in the estimated fair value of our Level 3 liabilities during the three-month periods ended September 30, 2016 and 2015 was increases of $839,000 and $1.6 million, respectively. The change in the estimated fair value of our Level 3 liabilities during the nine-month periods ended September 30, 2016 and 2015 was a decrease of $1.8 million and an increase of $1.7 million, respectively.

4. Stock-Based Compensation

For the three-month periods ended September 30, 2016 and 2015, our total stock-based compensation expense, which includes reversals of expense for certain forfeited or cancelled awards, was approximately $50,000 and $397,000, respectively. For the nine-month periods ended September 30, 2016 and 2015, our total stock-based compensation expense, which includes reversals of expense for certain forfeited or cancelled awards, was approximately $311,000 and $1.9 million, respectively. We have not recorded any income tax benefit related to stock-based compensation in any of the three-month or nine-month periods ended September 30, 2016 and 2015.

A summary of the status of our stock options as of September 30, 2016, and changes during the nine-month period then ended, is presented below:

	Nine Months Ended September 30, 2016			
	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding at beginning of period	5,437,064	$ 1.96		
Granted	459,457	1.05		
Exercised	—	—		
Canceled and Forfeited	(1,900,790)	1.66		
Expired	(299,000)	2.42		
Outstanding at end of period	3,696,731	$ 1.97	6.7 years	$ 90,039
Exercisable at end of period	2,602,167	$ 2.04	6.2 years	$ 88,815

A summary of the status of our unvested restricted stock as of September 30, 2016, and changes during the nine-month period then ended, is presented below:

	Nine Months Ended September 30, 2016	
	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested at beginning of period	361,000	$ 1.69
Granted	168,000	1.20
Vested	(66,000)	1.65
Forfeited	(206,000)	1.77
Unvested at end of period	257,000	$ 1.32

During the nine-month period ended September 30, 2016, 66,000 shares of restricted stock held by non-employee directors with an aggregate fair value of $63,360 vested as scheduled according to the terms of the restricted stock agreements. Also during the nine-month period ended September 30, 2016, 206,000 shares of unvested restricted

stock were forfeited upon resignation of certain directors and an officer.

As of September 30, 2016, there was approximately $374,000 of total unrecognized compensation expense related to unvested stock-based awards, which we expect to recognize over the remaining weighted average vesting term of 1.2 years.

5. Earnings (Loss) Per Share

Basic earnings (loss) per share is calculated by dividing net income (loss) attributable to common stockholders by the weighted-average number of common shares and, except for periods with a loss from operations, participating securities outstanding during the period. Diluted earnings (loss) per share reflects additional common shares that would have been outstanding if dilutive potential common shares had been issued. Potential common shares that may be issued by the Company include convertible debt, convertible preferred stock, options and warrants.

Diluted earnings (loss) per common share for the nine-month periods ended September 30, 2016 and 2015 excludes the effects of 14.5 million and 19.3 million common share equivalents, respectively, since such inclusion would be anti-dilutive. The excluded shares consist of common shares issuable upon exercise of outstanding stock options and warrants, and upon the conversion of convertible debt and convertible preferred stock.

The Company’s unvested stock awards contain nonforfeitable rights to dividends or dividend equivalents, whether paid or unpaid (referred to as “participating securities”). Therefore, the unvested stock awards are required to be included in the number of shares outstanding for both basic and diluted earnings per share calculations. However, due to our loss from operations, 257,000 shares of unvested restricted stock for the three-month and nine-month periods ended September 30, 2016, and 503,500 shares of unvested restricted stock for the three-month and nine-month periods ended September 30, 2015, respectively, were excluded in determining basic and diluted loss per share because such inclusion would be anti-dilutive.

6. Inventory

All components of inventory are valued at the lower of cost (first-in, first-out) or market. We adjust inventory to market value when the net realizable value is lower than the carrying cost of the inventory. Market value is determined based on estimated sales activity and margins. We estimate a reserve for obsolete inventory based on management's judgment of probable future commercial use, which is based on an analysis of current inventory levels, estimated future sales and production rates, and estimated shelf lives.

The components of inventory as of September 30, 2016 and December 31, 2015 are as follows:

	September 30, 2016 (unaudited)	December 31, 2015
Materials	$517,650	$330,000
Work-in-process	65,611	392,457
Finished goods	442,881	275,168
Reserves	(221,260)	(344,719)
Total	$804,882	$652,906

During the nine month-period ended September 30, 2015, we wrote off $120,000 of materials related to production issues. During the nine-month periods ended September 30, 2016 and 2015, the Company used $45,000 and $184,000, respectively, of Lymphoseek inventory for clinical study and product development purposes.

7. Investment in Macrophage Therapeutics, Inc.

In December 2015 and May 2016, Platinum contributed a total of $200,000 to MT. MT was not obligated to provide anything in return, although it was considered likely that the MT Board would ultimately authorize some form of compensation to Platinum. As such, the Company recorded the $200,000 as a current liability pending determination of the form of compensation.

In July 2016, MT's Board of Directors authorized modification of the original investments of $300,000 by Platinum and $200,000 by Dr. Goldberg to a convertible preferred stock with a 10% paid-in-kind (PIK) coupon retroactive to the time the initial investments were made. The conversion price of the preferred will remain at the $500 million initial market cap but a full ratchet will be added to enable the adjustment of conversion price, warrant number and exercise price based on the valuation of the first institutional investment round. In addition, the MT Board authorized issuance of additional convertible preferred stock with the same terms to Platinum as compensation for the additional $200,000 of investments made in December 2015 and May 2016. As of the date of filing of this Form 10-Q, final documents related to the above transactions authorized by the MT Board have not been completed.

8. Investment in R-NAV, LLC

Effective May 31, 2016, Navidea terminated its joint venture with R-NAV. Under the terms of the agreement, Navidea (1) transferred all of its shares of R-NAV, consisting of 1,500,000 Series A Preferred Units and 3,500,000 Common Units, to R-NAV; and (2) paid $110,000 in cash to R-NAV. In exchange, R-NAV (1) transferred all of its shares of TcRA Imaging, Inc. (TcRA) to Navidea, thereby returning the technology licensed to TcRA to Navidea; and (2) forgave the $333,333 remaining on the promissory note. Neither Navidea nor R-NAV has any further obligations of any kind to either party. As a result of this transaction, the Company recognized a loss on disposal of the investment in R-NAV of $39,732 during the second quarter of 2016.

Navidea's investment in R-NAV was being accounted for using the equity method of accounting. Navidea's equity in the loss of R-NAV was $15,159 and $268,432, respectively, for the nine-month periods ended September 30, 2016 and 2015. Navidea's equity in the loss of R-NAV exceeded our initial investment in R-NAV. As such, the carrying value of the Company's investment in R-NAV was $0 as of the date of termination.

The Company's obligation to provide $500,000 of in-kind services to R-NAV was being recognized as those services were provided. The Company provided $15,000 and $27,000, respectively, of in-kind services during the nine-month periods ended September 30, 2016 and 2015. As of the date of termination, the Company had $383,000 of in-kind services remaining to provide under this obligation. This obligation ceased on May 31, 2016 under the terms of the agreement.

Navidea provided additional services to R-NAV in support of its development activities. Such services were immaterial to Navidea's overall operations.

9. Notes Payable

Platinum

In July 2012, we entered into an agreement with Platinum to provide us with a credit facility of up to $50 million. Following the approval of Lymphoseek, Platinum was committed under the terms of the agreement to extend up to $35 million in debt financing to the Company. During the nine-month period ended September 30, 2016, $814,000 of interest was compounded and added to the balance of the Platinum Note. In accordance with the terms of a Section 16(b) Settlement Agreement, Platinum agreed to forgive interest owed on the credit facility in an amount equal to 6%, effective July 1, 2016. As of September 30, 2016, the outstanding principal balance of the Platinum Note was approximately $9.3 million, with $27.3 million currently available under the credit facility. An additional $15 million is potentially available under the credit facility on terms to be negotiated. However, based on Platinum's recent filing for Chapter 15 bankruptcy protection, Navidea has substantial doubt about Platinum's ability to fund future draw requests under the credit facility.

The Platinum Note is reflected on the consolidated balance sheets at its estimated fair value, which includes the estimated fair value of the embedded conversion option of $1.3 million. During the three-month periods ended September 30, 2016 and 2015, changes in the estimated fair value of the Platinum conversion option were increases of $839,000 and $1.6 million, respectively, and were recorded as non-cash changes in the fair value of the conversion option. During the nine-month periods ended September 30, 2016 and 2015, changes in the estimated fair value of the Platinum conversion option were a decrease of $1.8 million and an increase of $1.7 million, respectively, and were recorded as non-cash changes in the fair value of the conversion option. The estimated fair value of the Platinum Note was $10.5 million as of September 30, 2016.

The Platinum Loan Agreement includes a covenant that results in an event of default on the Platinum Loan Agreement upon default on the CRG Loan Agreement. As discussed above, the Company is maintaining its position that CRG's alleged claims do not constitute events of default under the CRG Loan Agreement and believes it has defenses against such claims. The Company has obtained a waiver from Platinum confirming that we are not in default under the Platinum Loan Agreement as a result of the alleged default on the CRG Loan Agreement and as such, we are currently in compliance with all covenants under the Platinum Loan Agreement.

Capital Royalty Partners II, L.P.

In May 2015, Navidea and its subsidiary Macrophage Therapeutics, Inc., as guarantor, executed a Term Loan Agreement with CRG in its capacity as a lender and as control agent for other affiliated lenders party to the CRG Loan Agreement (collectively, the Lenders) in which the Lenders agreed to make a term loan to the Company in the aggregate principal amount of $50 million (the CRG Term Loan), with an additional $10 million in loans to be made available upon the satisfaction of certain conditions stated in the CRG Loan Agreement. During the nine-month period ended September 30, 2016, $553,000 of interest was compounded and added to the balance of the CRG Term Loan. Pursuant to a notice of default letter sent to Navidea by CRG, the Company stopped compounding interest in the second quarter of 2016 and began recording accrued interest. As of September 30, 2016, $4.7 million of accrued interest is included in accrued liabilities and other on the consolidated balance sheets. As of September 30, 2016, the outstanding principal balance of the CRG Term Loan was $51.7 million.

In connection with the CRG Loan Agreement, the Company recorded a debt discount related to lender fees and other costs directly attributable to the CRG Loan Agreement totaling $2.2 million, including a $1.0 million facility fee

which is payable at the end of the term or when the loan is repaid in full. A long-term liability was recorded for the $1.0 million facility fee. The debt discount was being amortized as non-cash interest expense using the effective interest method over the term of the CRG Loan Agreement. As further described below, the facility fee was fully paid off and the debt discount was accelerated and fully amortized in the second quarter of 2016.

The CRG Term Loan is collateralized by a security interest in substantially all of the Company's assets. In addition, the CRG Loan Agreement requires that the Company adhere to certain affirmative and negative covenants, including financial reporting requirements and a prohibition against the incurrence of indebtedness, or creation of additional liens, other than as specifically permitted by the terms of the CRG Loan Agreement. The Lenders may accelerate the payment terms of the CRG Loan Agreement upon the occurrence of certain events of default set forth therein, which include the failure of the Company to make timely payments of amounts due under the CRG Loan Agreement, the failure of the Company to adhere to the covenants set forth in the CRG Loan Agreement, and the insolvency of the Company. The covenants of the CRG Loan Agreement include a covenant that the Company shall have EBITDA of no less than $5 million in each calendar year during the term or revenues from sales of Lymphoseek in each calendar year during the term of at least $22.5 million in 2016, with the target minimum revenue increasing in each year thereafter until reaching $45 million in 2020. However, if the Company were to fail to meet the applicable minimum EBITDA or revenue target in any calendar year, the CRG Loan Agreement provides the Company a cure right if it raises 2.5 times the EBITDA or revenue shortfall in equity or subordinated debt and deposits such funds in a separate blocked account. Additionally, the Company must maintain liquidity, defined as the balance of unencumbered cash and permitted cash equivalent

investments, of at least $5 million during the term of the CRG Term Loan. The events of default under the CRG Loan Agreement also include a failure of Platinum to perform its funding obligations under the Platinum Loan Agreement at any time as to which the Company had negative EBITDA for the most recent fiscal quarter, as a result either of Platinum's repudiation of its obligations under the Platinum Loan Agreement, or the occurrence of an insolvency event with respect to Platinum. An event of default would entitle CRG to accelerate the maturity of our indebtedness, increase the interest rate from 14% to the default rate of 18% per annum, and invoke other remedies available to it under the loan agreement and the related security agreement.

During the second quarter of 2016, CRG alleged multiple claims of default on the CRG Loan Agreement, and filed suit in the District Court of Harris County, Texas. On June 22, 2016, CRG exercised control over one of the Company's primary bank accounts and took possession of $4.1 million that was on deposit. CRG subsequently notified the Company that the cash was used to reimburse CRG for actual costs and expenses incurred by CRG related to the collection of the collateral of $778,000, pay the prepayment premium of $2.1 million and the backend facility fee of $1.0 million, and the remaining $189,000 was applied to the principal balance of the loan. The collection fees and prepayment premium were recorded as interest expense, the backend facility fee reduced the liability that was recorded for that purpose at inception, and the principal payment reduced the balance of the debt during the second quarter of 2016. In addition, the remaining unamortized balance of the debt discount of $2.0 million was recorded as interest expense during the second quarter of 2016. Although we have conservatively categorized these expenses according to the manner in which CRG applied them, we believe the $4.1 million should be applied entirely to the outstanding principal balance of the loan.

On July 13, 2016, a hearing was held in the District Court of Harris County, Texas with respect to an application for temporary injunction (ATI) filed by CRG in June 2016. At the conclusion of the hearing, the Court ordered the parties to mediation and stayed any ruling on CRG's request for injunctive relief until after a mediation has been completed. On July 20, the parties participated in mediation but were not successful in reaching an agreement. On July 29, 2016, the Harris County, Texas judge recused herself from the case, citing inability to be impartial. A new judge was appointed on July 29, 2016.

On August 30, 2016, the District Court of Harris County, Texas granted CRG's ATI. The Court provided the Company with 21 days to enter into the requisite account control agreements with CRG. In September 2016, the ATI was superseded by the requirement to maintain $2.5 million in a pledged collateral account that is subject to an account control agreement. The Order granting the ATI is currently on appeal to the Fourteenth Court of Appeals. Briefing is expected to be completed by early December 2016, after which a date will be set for oral arguments.

Discovery is ongoing in the Texas court action; the discovery period ends June 23, 2017. CRG filed an objection to the supersedeas that was heard on October 31, 2016, during which the court ruled that an additional $500,000 should be placed in the pledged collateral account within ten days of the ruling. In addition, CRG has filed a motion for partial summary judgment that currently is set for hearing on December 12, 2016. The Company is preparing responses to the motion for partial summary judgment. The trial date is currently set for July 3, 2017.

In June 2016, CRG contacted our primary distribution partner, Cardinal Health, and demanded that Cardinal Health make all future payments for Lymphoseek sales directly to CRG, rather than to Navidea. Cardinal Health filed an interpleader in the Franklin County, Ohio Court of Common Pleas, requesting that the court make a determination as to whom Cardinal Health should make such payments. Rulings on June 28, 2016 and August 1, 2016 resulted in $1.0 million of Cardinal Health payments being placed in escrow with the court, with the remaining Cardinal Health payments going directly to the Company.

In October 2016, a revised temporary restraining order was issued, allowing the Company to receive 100% of the receivables due from Cardinal Health, with an additional $1 million deposited in the pledged collateral account by the Company as a bond. Further, the court ruled that the Company remain current on its quarterly interest payments to CRG. On October 7, 2016 the Company paid $1.3 million to CRG to cover the third quarter 2016 interest payment. The $1.0 million previously deposited by Cardinal Health in the Court's registry as a bond will also be transferred to the pledged collateral account. CRG has filed a motion to dismiss the Company's cross-claims in Cardinal Health's interpleader action. The Company is in the process of responding to CRG's motion to dismiss.

The Company maintains that CRG's allegations of multiple events of default under the CRG Loan Agreement are without merit and the Company believes it has defenses against these claims. Furthermore, the Company believes that CRG's actions constitute a material breach of the CRG Loan Agreement and therefore, the Company is no longer subject to certain provisions of the CRG Loan Agreement. The Company believes that its best course of action is to pay off or refinance the CRG debt and pursue claims for damages. The Company is continuing to explore alternative financing arrangements, including the Proposed Transaction with Cardinal Health, in order to pay off or refinance the CRG debt. There can be no assurance that CRG will not prevail in exercising control over any additional banking arrangements that the Company creates, that the Company will be able to pay off or refinance the CRG debt or that the Company will be successful in its claims for damages. In light of current circumstances, the ability of the Company to continue as a going concern is in substantial doubt and dependent upon its ability to generate sufficient cash flow to sustain its operations on a timely basis, to obtain additional financing as may be required, and to pay off or refinance the CRG debt. See Notes 2 and 10.

Based on CRG's claims that the Company is in default under the terms of the CRG Loan Agreement, and in accordance with current accounting guidance, the Company has classified the balance of the CRG Term Loan as a current liability as of September 30, 2016.

R-NAV, LLC

Effective May 31, 2016, Navidea terminated its joint venture with R-NAV. In accordance with the terms of the agreement, R-NAV forgave the $333,333 remaining on the promissory note. See Note 8.

Summary

During the three-month periods ended September 30, 2016 and 2015, we recorded net interest expense of $2.6 million and $2.1 million, respectively, primarily related to our notes payable. Of these amounts, $0 and $65,000, respectively, related to amortization of the debt discounts related to our notes payable. An additional $190,000 and $802,000, respectively, of total interest expense was compounded and added to the balance of our notes payable during the three-month periods ended September 30, 2016 and 2015. During the nine-month periods ended September 30, 2016 and 2015, we recorded net interest expense of $12.3 million and $4.7 million, respectively, primarily related to our notes payable. Of these amounts, $78,000 and $424,000, respectively, related to amortization of the debt discounts related to our notes payable. An additional $1.4 million and $1.2 million, respectively, of total interest expense was compounded and added to the balance of our notes payable during the nine-month periods ended September 30, 2016 and 2015. The collection fees of $778,000, prepayment premium of $2.1 million, and the remaining unamortized balance of the CRG debt discount of $2.0 million were also recorded as interest expense during the nine-month period ended September 30, 2016.

10. Commitments and Contingencies

Sinotau Litigation

On August 31, 2015, Sinotau Pharmaceutical Group (Sinotau) filed a suit for damages, specific performance and injunctive relief against the Company in the United States District Court for the District of Massachusetts alleging breach of a letter of intent for licensing to Sinotau of the Company's NAV4694 product candidate and technology. The Company believed the suit was without merit and filed a motion to dismiss the action. In September 2016, the court determined that there was enough evidence to proceed with the case and denied Navidea's motion to dismiss. Navidea is currently preparing for a trial which is expected to take place within the next twelve months. At this time it is not possible to determine with any degree of certainty the ultimate outcome of this legal proceeding, including making a determination of liability.

In July 2016, the Company executed a term sheet with Cerveau Technologies, Inc. (Cerveau) as a designated party for the rights resulting from the relationship between Navidea and Sinotau. The term sheet outlined the terms of a potential agreement between the parties to sublicense NAV4694 to Cerveau in return for license fees, milestone payments and royalties. With the exception of certain provisions, the term sheet was non-binding and was subject to the agreement of AstraZeneca, from whom the Company has licensed the NAV4694 technology. The Company had 60 days to execute a definitive agreement, however no definitive agreement was reached. Discussions related to the potential partnering or divestiture of NAV4694 are ongoing.

CRG Litigation

During the second quarter of 2016, CRG alleged multiple claims of default on the CRG Loan Agreement, and filed suit in the District Court of Harris County, Texas. On June 22, 2016, CRG exercised control over one of the Company's primary bank accounts and took possession of $4.1 million that was on deposit. CRG subsequently notified the Company that the cash was used to reimburse CRG for actual costs and expenses incurred by CRG related to the collection of the collateral of $778,000, pay the prepayment premium of $2.1 million and the backend facility fee of $1.0 million, and the remaining $189,000 was applied to the principal balance of the loan.

On July 13, 2016, a hearing was held in the District Court of Harris County, Texas with respect to an application for temporary injunction (ATI) filed by CRG in June 2016. At the conclusion of the hearing, the Court ordered the parties to mediation and stayed any ruling on CRG's request for injunctive relief until after a mediation has been completed. On July 20, the parties participated in mediation but were not successful in reaching an agreement. On July 29, 2016, the Harris County, Texas judge recused herself from the case, citing inability to be impartial. A new judge was appointed on July 29, 2016.

On August 30, 2016, the District Court of Harris County, Texas granted CRG's ATI. The Court provided the Company with 21 days to enter into the requisite account control agreements with CRG. In September 2016, the ATI was superseded by the requirement to maintain $2.5 million in a pledged collateral account that is subject to an account control agreement. The Order granting the ATI is currently on appeal to the Fourteenth Court of Appeals. Briefing is expected to be completed by early December 2016, after which a date will be set for oral arguments.

Discovery is ongoing in the Texas court action; the discovery period ends June 23, 2017. CRG filed an objection to the supersedeas that was heard on October 31, 2016, during which the court ruled that an additional $500,000 should be placed in the pledged collateral account within ten days of the ruling. In addition, CRG has filed a motion for partial summary judgment that currently is set for hearing on December 12, 2016. The Company is preparing responses to the motion for partial summary judgment. The trial date is currently set for July 3, 2017.

In June 2016, CRG contacted our primary distribution partner, Cardinal Health, and demanded that Cardinal Health make all future payments for Lymphoseek sales directly to CRG, rather than to Navidea. Cardinal Health filed an interpleader in the Franklin County, Ohio Court of Common Pleas, requesting that the court make a determination as to whom Cardinal Health should make such payments. Rulings on June 28, 2016 and August 1, 2016 resulted in $1.0 million of Cardinal Health payments being placed in escrow with the court, with the remaining Cardinal Health payments going directly to the Company.

In October 2016, a revised TRO was issued, allowing the Company to receive 100% of the receivables due from Cardinal Health, with an additional $1.0 million deposited in a pledged collateral account by the Company as a bond. The $1.0 million previously deposited by the Company in the Court's registry as a bond will also be transferred to the pledged collateral account. CRG has filed a motion to dismiss the Company's cross-claims in Cardinal Health's interpleader action. The Company is in the process of responding to CRG's motion to dismiss.

The Company maintains that CRG's allegations of multiple events of default under the CRG Loan Agreement are without merit and the Company believes it has defenses against these claims. Furthermore, the Company believes that CRG's actions constitute a material breach of the CRG Loan Agreement and therefore, the Company is no longer subject to certain provisions of the CRG Loan Agreement. The Company believes that its best course of action is to pay off or refinance the CRG debt and pursue claims for damages. The Company is continuing to explore alternative financing arrangements, including the Proposed Transaction with Cardinal Health, in order to pay off or refinance the CRG debt. There can be no assurance that CRG will not prevail in exercising control over any additional banking arrangements that the Company creates, that the Company will be able to pay off or refinance the CRG debt or that the Company will be successful in its claims for damages. See Notes 2 and 9.

Former CEO Arbitration

On May 12, 2016 the Company received a demand for arbitration through the American Arbitration Association, Columbus, Ohio, from Ricardo J. Gonzalez, the Company's then Chief Executive Officer, claiming that he was terminated without cause and, alternatively, that he resigned in accordance with Section 4G of his Employment Agreement pursuant to a notice received by the Company on May 9, 2016. On May 13, 2016, the Company notified Mr. Gonzalez that his failure to undertake responsibilities assigned to him by the Board of Directors and otherwise work after being ordered to do so on multiple occasions constituted an effective resignation, and the Company accepted that resignation. The Company rejected the resignation of Mr. Gonzalez pursuant to Section 4G of his Employment Agreement. Also, the Company notified Mr. Gonzalez that, alternatively, his failure to return to work after the expiration of the cure period provided in his Employment Agreement constituted cause for his termination under his Employment Agreement. Mr. Gonzalez is seeking severance and other amounts claimed to be owed to him under his employment agreement. The Company intends to vigorously defend its position. In addition, the Company has filed counterclaims against Mr. Gonzalez. A three-person arbitration board has been chosen and a hearing is set for April 3-7, 2017 in Columbus, Ohio.

Former Director Litigation

On August 12, 2016, the Company commenced an action in the Superior Court of California for damages and injunctive relief against former Navidea Chairman and Macrophage Board Member Anton Gueth. The Complaint

alleges, in part, that Mr. Gueth intentionally failed to disclose his prior existing relationship with CRG, in addition to multiple breaches including duty, loyalty and contract, interference and misappropriation. Litigation is currently stayed while the parties attempt to negotiate a settlement.

FTI Consulting, Inc. Litigation

On October 11, 2016, the Company was served with a Complaint filed in the Supreme Court of the State of New York, County of New York, alleging damages of at least $782,601.51 arising from investigative and consulting services that Plaintiff alleges it was retained by the Company to perform. The Company disputes the amount claimed to be due, as well as whether the services performed were properly authorized, and intends to vigorously defend the action.

11. Equity Instruments

During the nine-month period ended September 30, 2016, we issued 72,649 shares of our common stock valued at $56,609 to certain members of our Board of Directors who elected to receive stock in lieu of cash compensation.

12. Stock Warrants

At September 30, 2016, there are 11.7 million warrants outstanding to purchase Navidea's common stock. The warrants are exercisable at prices ranging from $0.01 to $3.04 per share with a weighted average exercise price of $0.38 per share. The warrants have remaining outstanding terms ranging from 0.2 to 19 years.

In addition, at September 30, 2016, there are 300 warrants outstanding to purchase MT's Common Stock. The warrants are exercisable at $2,000 per share.

13. Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Due to the uncertainty surrounding the realization of the deferred tax assets in future tax returns, all of the deferred tax assets have been fully offset by a valuation allowance at September 30, 2016 and December 31, 2015.

Current accounting standards include guidance on the accounting for uncertainty in income taxes recognized in the financial statements. Such standards also prescribe a recognition threshold and measurement model for the financial statement recognition of a tax position taken, or expected to be taken, and provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. The Company believes that the ultimate deductibility of all tax positions is highly certain, although there is uncertainty about the timing of such deductibility. As a result, no liability for uncertain tax positions was recorded as of September 30, 2016 or December 31, 2015 and we do not expect any significant changes in the next twelve months. Should we need to accrue interest or penalties on uncertain tax positions, we would recognize the interest as interest expense and the penalties as a selling, general and administrative expense. As of September 30, 2016, tax years 2012-2015 remained subject to examination by federal and state tax authorities.

14. Segments

We report information about our operating segments using the "management approach" in accordance with current accounting standards. This information is based on the way management organizes and reports the segments within the enterprise for making operating decisions and assessing performance. Our reportable segments are identified based on differences in products, services and markets served. There were no inter-segment sales. Prior to 2015, our products and development programs were all related to diagnostic substances. Our majority-owned subsidiary, Macrophage Therapeutics, Inc., was formed and received initial funding during the first quarter of 2015, which resulted in a re-evaluation of the Company's segment determination. We now manage our business based on two primary types of drug products: (i) diagnostic substances, including Lymphoseek and other diagnostic applications of our Manocept platform, our R-NAV joint venture (terminated on May 31, 2016), NAV4694 and NAV5001 (license

terminated in April 2015), and (ii) therapeutic development programs, including therapeutic applications of our Manocept platform and all development programs undertaken by Macrophage Therapeutics, Inc.

The information in the following tables is derived directly from each reportable segment's financial reporting.

Three Months Ended September 30, 2016	Diagnostics	Therapeutics	Corporate	Total
Lymphoseek sales revenue:				
United States [1]	$6,670,644	$ —	$—	$6,670,644
International	19,446	—	—	19,446
Lymphoseek license revenue	1,295,625	—	—	1,295,625
Grant and other revenue	501,013	10,346	—	511,359
Total revenue	8,486,728	10,346	—	8,497,074
Cost of goods sold, excluding depreciation and amortization	909,539	—	—	909,539
Research and development expenses, excluding depreciation and amortization	1,028,389	247,664	—	1,276,053
Selling, general and administrative expenses, excluding depreciation and amortization [2]	839,410	27,758	1,974,419	2,841,587
Depreciation and amortization [3]	12,278	—	99,186	111,464
Income (loss) from operations [4]	5,697,112	(265,076)	(2,073,605)	3,358,431
Other income (expense), excluding equity in the loss of R-NAV, LLC [5]	—	—	(3,417,967)	(3,417,967)
Net income (loss)	5,697,112	(265,076)	(5,491,572)	(59,536)
Total assets, net of depreciation and amortization:				
United States	4,673,425	9,356	6,357,898	11,040,679
International	148,224	—	697	148,921
Capital expenditures	—	—	1,847	1,847

Three Months Ended September 30, 2015	Diagnostics	Therapeutics	Corporate	Total
Lymphoseek sales revenue:				
United States [1]	$2,942,498	$ —	$—	$2,942,498
International	10,024	—	—	10,024
Lymphoseek license revenue	550,000	—	—	550,000
Grant and other revenue	476,755	—	—	476,755
Total revenue	3,979,277	—	—	3,979,277
Cost of goods sold, excluding depreciation and amortization	442,094	—	—	442,094
Research and development expenses, excluding depreciation and amortization	3,603,501	297,137	—	3,900,638
Selling, general and administrative expenses, excluding depreciation and amortization [2]	1,063,062	42,487	2,721,844	3,827,393
Depreciation and amortization [3]	17,013	—	115,216	132,229
Loss from operations [4]	(1,146,393)	(339,624)	(2,837,060)	(4,323,077)
Other income (expense), excluding equity in the loss of	—	—	(3,721,242)	(3,721,242)

R-NAV, LLC [5]				
Equity in the loss of R-NAV, LLC	—	—	(26,785)	(26,785)
Net loss	(1,146,393)	(339,624)	(6,585,087)	(8,071,104)
Total assets, net of depreciation and amortization:				
United States	3,750,702	—	13,291,939	17,042,641
International	440,349	—	467	440,816
Capital expenditures	—	—	2,788	2,788

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Nine Months Ended September 30, 2016	Diagnostics	Therapeutics	Corporate	Total
Lymphoseek sales revenue:				
United States [1]	$14,660,670	$—	$—	$14,660,670
International	43,819	—	—	43,819
Lymphoseek license revenue	1,795,625	—	—	1,795,625
Grant and other revenue	2,052,197	61,798	—	2,113,995
Total revenue	18,552,311	61,798	—	18,614,109
Cost of goods sold, excluding depreciation and amortization	1,950,644	—	—	1,950,644
Research and development expenses, excluding depreciation and amortization	5,860,364	600,790	—	6,461,154
Selling, general and administrative expenses, excluding depreciation and amortization [2]	2,987,074	31,590	6,594,918	9,613,582
Depreciation and amortization [3]	66,842	—	311,992	378,834
Income (loss) from operations [4]	7,687,387	(570,582)	(6,906,910)	209,895
Other income (expense), excluding equity in the loss of R-NAV, LLC [5]	—	—	(10,621,828)	(10,621,828)
Equity in the loss of R-NAV, LLC	—	—	(15,159)	(15,159)
Net income (loss)	7,687,387	(570,582)	(17,543,897)	(10,427,092)
Total assets, net of depreciation and amortization:				
United States	4,673,425	9,356	6,357,898	11,040,679
International	148,224	—	697	148,921
Capital expenditures	—	—	1,847	1,847

Nine Months Ended September 30, 2015	Diagnostics	Therapeutics	Corporate	Total
Lymphoseek sales revenue:				
United States [1]	$6,736,418	$—	$—	$6,736,418
International	15,074	—	—	15,074
Lymphoseek license revenue	883,333	—	—	883,333
Grant and other revenue	1,320,816	—	—	1,320,816
Total revenue	8,955,641	—	—	8,955,641
Cost of goods sold, excluding depreciation and amortization	1,167,141	—	—	1,167,141
Research and development expenses, excluding depreciation and amortization	9,610,012	559,888	—	10,169,900
Selling, general and administrative expenses, excluding depreciation and amortization [2]	4,634,279	120,872	8,381,910	13,137,061
Depreciation and amortization [3]	207,498	—	223,870	431,368
Loss from operations [4]	(6,663,289)	(680,760)	(8,605,780)	(15,949,829)
Other income (expense), excluding equity in the loss of	—	—	(8,808,202)	(8,808,202)

R-NAV, LLC [5]				
Equity in the loss of R-NAV, LLC	—	—	(295,217)	(295,217)
Net loss	(6,663,289)	(680,760)	(17,709,199)	(25,053,248)
Total assets, net of depreciation and amortization:				
United States	3,750,702	—	13,291,939	17,042,641
International	440,349	—	467	440,816
Capital expenditures	25,492	—	4,914	30,406

[1] All sales to Cardinal Health are made in the United States; Cardinal distributes the product throughout the U.S. through its network of nuclear pharmacies.

[2] General and administrative expenses, excluding depreciation and amortization, represent costs that relate to the general administration of the Company and as such are not currently allocated to our individual reportable segments. Marketing and selling expenses are allocated to our individual reportable segments.

(3) Depreciation and amortization is reflected in cost of goods sold ($12,278 and $15,496 for the three-month periods ended September 30, 2016 and 2015, and $66,842 and $72,237 for the nine-month periods ended September 30, 2016 and 2015), research and development ($0 and $1,517 for the three-month periods ended September 30, 2016 and 2015, and $0 and $10,617 for the nine-month periods ended September 30, 2016 and 2015), and selling, general and administrative expenses ($99,186 and $115,216 for the three-month periods ended September 30, 2016 and 2015, and $311,992 and $348,514 for the nine-month periods ended September 30, 2016 and 2015).

(4) Loss from operations does not reflect the allocation of certain selling, general and administrative expenses, excluding depreciation and amortization, to our individual reportable segments.

(5) Amounts consist primarily of interest income, interest expense, changes in fair value of financial instruments, and losses on debt extinguishment, which are not currently allocated to our individual reportable segments.

15. Supplemental Disclosure for Statements of Cash Flows

During the nine-month periods ended September 30, 2016 and 2015, we paid interest aggregating $4.2 million and $3.3 million, respectively. Interest paid during the nine-month period ended September 30, 2016 includes collection fees of $778,000 and a prepayment premium of $2.1 million, both of which were withdrawn by CRG from a bank account under their control. During the nine month-period ended September 30, 2015, we recorded $1.0 million of end-of-term fees associated with our notes payable to CRG. During the nine-month periods ended September 30, 2016 and 2015, we issued 67,002 and 68,157 shares of our common stock as matching contributions to our 401(k) Plan which were valued at $120,800 and $117,099, respectively.

16. Subsequent Events

a. CRG Litigation: CRG's objection to the supersedeas was heard on October 31, 2016, during which the Texas court ruled that an additional $500,000 should be placed in the pledged collateral account within ten days of the ruling. Also in October 2016, a revised temporary restraining order was issued by the Ohio court, allowing the Company to receive 100% of the receivables due from Cardinal Health, with an additional $1.0 million deposited in the pledged collateral account by the Company as a bond. Further, the Ohio court ruled that the Company remain current on its quarterly interest payments to CRG. On October 7, 2016 the Company paid $1.3 million to CRG to cover the third quarter 2016 interest payment. The $1.0 million previously deposited by Cardinal Health in the Court's registry as a bond will also be transferred to the pledged collateral account.

b. FTI Consulting, Inc. Litigation: On October 11, 2016, the Company was served with a Complaint filed in the Supreme Court of the State of New York, County of New York, alleging damages of at least $782,601.51 arising from investigative and consulting services that Plaintiff alleges it was retained by the Company to perform. The Company disputes the amount claimed to be due, as well as whether the services performed were properly authorized, and intends to vigorously defend the action.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This report 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. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things:

- general economic and business conditions, both nationally and in our markets;
- our history of losses, negative net worth and uncertainty of future profitability;
- our ability to repay our debts;
- the outcome of the CRG 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;
- our expectations and estimates concerning future financial performance, financing plans and the impact of competition;
- our ability to raise capital sufficient to fund our development and commercialization programs;
- our ability to implement our growth strategy;
- anticipated trends in our business;
- advances in technologies; and
- other risk factors set forth in this report and detailed in our most recent Annual Report on Form 10-K and other SEC filings.

In addition, in this report, we use words such as "anticipate," "believe," "plan," "expect," "future," "intend," and similar expressions to identify forward-looking statements.

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.

The Company

Navidea Biopharmaceuticals, Inc. (Navidea, the Company, or we), a Delaware corporation (NYSE MKT: NAVB), is a biopharmaceutical company focused on the development and commercialization of precision immunodiagnostic agents and immunotherapeutics. Navidea is developing multiple precision-targeted products based on our Manocept™ platform to help identify the sites and pathways of undetected disease and enable better diagnostic accuracy, clinical decision-making, targeted treatment and, ultimately, patient care.

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 Lymphoseek® (technetium Tc 99m tilmanocept) injection, the first product developed and commercialized by Navidea based on the platform. Lymphoseek is a novel, state-of-the-art, receptor-targeted, small-molecule radiopharmaceutical used in the evaluation of lymphatic basins that may have cancer involvement in patients. Lymphoseek is designed for the precise identification of lymph nodes that drain from a primary tumor, which have the highest probability of harboring cancer. Lymphoseek is approved by the U.S. Food and Drug Administration (FDA) for use in solid tumor cancers where lymphatic mapping is a component of surgical management and for guiding sentinel lymph node biopsy in

patients with clinically node negative breast cancer, melanoma or squamous cell carcinoma of the oral cavity.

On September 5, 2016, the Company entered into a non-binding letter of intent (LOI) with Cardinal Health pursuant to which Cardinal Health intends to acquire the Company's Lymphoseek product (the Product) and certain intellectual property rights and other assets related to the Product (the Acquired Assets) and assume certain liabilities associated with the Acquired Assets (the Proposed Transaction). The purchase price for the Proposed Transaction shall consist of (i) $80 million in cash payable at closing (reduced to the extent the amount of transferred Product inventory is less than $6 million), plus (ii) annual earn-out and milestone payments based upon the volume of Product sales. For the first three years, the earn-out payments shall be no less than $6.7 million per year. In no event will the entire purchase price, including all earn-out payments, exceed $310 million.

As part of the Proposed Transaction, the parties have agreed that simultaneous with the closing, subject to certain conditions, Cardinal Health will license to the Company (License Back), on a perpetual royalty free basis, certain rights to the Acquired Assets necessary for the Company to (i) develop, manufacture, market, sell and distribute new pharmaceutical and other products on an exclusive basis so long as such products do not compete with the Product, and (ii) manufacture, market, sell and distribute the Product throughout the world other than in North America on a non-exclusive basis.

Also as part of the Proposed Transaction, the Company shall grant to Cardinal Health five (5) year warrants to purchase up to 10 million shares of the Company's common stock, par value $.001 per share, at an exercise price of $1.50 per share and provide Cardinal Health with a right of first offer related to the assets covered by the License Back and new products developed by the Company in certain circumstances during the life of the Product's patents.

The parties intend to negotiate and execute definitive agreements for the Proposed Transaction with customary provisions for a transaction of this size and scope, including representations and warranties regarding the Company, its business, and the Acquired Assets, indemnification of Cardinal Health by the Company, covenants and closing conditions. The closing of the Proposed Transaction is subject to, among other things, the satisfactory completion of due diligence by Cardinal Health and approval of the Company's stockholders.

Unless written notice is given to the Company that Cardinal Health is ceasing further discussions related to the Proposed Transaction, the Company has agreed not to initiate or enter into any discussions with any third party regarding a possible sale of any equity or material assets of the Company or its subsidiaries for a period of thirty days from the date of the LOI. If the Company does not consummate a transaction with Cardinal Health as contemplated by the LOI and at any time within 180 days of the date of the LOI consummates one or more transactions that, directly or indirectly, result in a sale, license or other transfer of the Product, or all or substantially all of the Company's assets, then a certain Supply and Distribution Agreement between the Company and Cardinal Health shall automatically be extended for an additional three-year period. The parties have agreed that the provisions described in this paragraph shall be binding.

Lymphoseek has also received European approval in imaging and intraoperative detection of sentinel lymph nodes in patients with melanoma, breast cancer or localized squamous cell carcinoma of the oral cavity.

Building on the success of Lymphoseek, the flexible and versatile Manocept platform acts as an engine for the design of purpose-built molecules offering the potential to be utilized across a range of diagnostic modalities, including single photon emission computed tomography (SPECT), positron emission tomography (PET), intra-operative and/or optical-fluorescence detection in a variety of disease states.

Recent preclinical data generated by the Company in studies using tilmanocept linked to a therapeutic agent also suggest that tilmanocept's binding affinity to CD206 receptors demonstrates the potential for this technology to be useful in treating diseases linked to the over-activation of macrophages. This includes various cancers as well as autoimmune, infectious, cardiovascular, and central nervous system diseases. Our efforts in this area were further supported by the January 2015 formation of Macrophage Therapeutics, Inc., a majority-owned subsidiary that was formed specifically to further explore immuno-therapeutic applications for the Manocept platform.

Our focus on development of our proprietary Manocept platform technology further supports the 2014 decision by the Company's Board of Directors to reduce our support for, while seeking to partner or out-license, our two neurological development programs, NAV4694 and NAV5001.

Other than Lymphoseek, none of the Company's drug product candidates have been approved for sale in any market.

Product Line Overview

Our primary development efforts over the last few years have been focused on diagnostic products including our now-approved Lymphoseek product, as well as other diagnostic and therapeutic line extensions based on our Manocept platform, while we have sought to partner or divest our two neuro-imaging product candidates. Efforts to partner or divest NAV4694 are still active, while the in-license of NAV5001 we had with Alseres was terminated in April 2015.

The Company also continues working to establish new sources of non-dilutive funding, including collaborations and grant funding that can augment the balance sheet as the Company works to reduce spending to levels that can be supported by our revenues. In particular, substantial progress on the Manocept platform has resulted in several promising opportunities, including the formation of Macrophage Therapeutics, Inc. in January 2015. Additionally, in September 2016 the Company entered into a LOI with Cardinal Health that, if closed successfully, will significantly improve our financial condition and our ability to continue as a going concern.

Navidea has been awarded several Small Business Innovation Research (SBIR) and other grants to partially fund clinical trials to increase medical adoption of Lymphoseek in other solid tumors and development activities supporting other immuno-diagnostic applications through Phase 1/2 studies and the first grant to support development of an immunotherapeutic application in Kaposi’s sarcoma (KS).

Lymphoseek - Regulatory Background

Lymphoseek is a lymph node targeting radiopharmaceutical agent intended for use in intraoperative lymphatic mapping procedures and lymphoscintigraphy employed in the overall diagnostic assessment of certain solid tumor cancers. Lymphoseek has the potential to provide oncology surgeons with information to identify key predictive lymph nodes that may harbor cancer and to help avoid the unnecessary removal of non-cancerous lymph nodes and the surrounding tissue in patients with a variety of solid tumor cancers. Lymphoseek was approved and indicated for use in lymphatic mapping for breast cancer and melanoma by the FDA in March 2013. In June 2014, the FDA approved a supplemental New Drug Application (sNDA) for the expanded use of Lymphoseek indicated for guiding sentinel lymph node biopsy in head and neck cancer patients with squamous cell carcinoma of the oral cavity. In September 2014, the FDA granted Orphan Drug Designation for use in sentinel lymph node detection in patients with cancer of the head and neck. This designation provides for a seven-year market exclusivity period in this indication as well as certain incentives, including federal grants, tax credits and a waiver of filing fees. In October 2014, the FDA approved a second sNDA for lymphatic mapping in solid tumors and added sentinel lymph node detection for breast cancer and melanoma to the approved indications. The FDA also allowed expanded utilization of Lymphoseek with or without scintigraphic imaging, known as lymphoscintigraphy, to enable pre-operative imaging and mapping of lymph nodes to facilitate node localization during surgical procedures. Lymphoseek is now the first and only FDA-approved radiopharmaceutical agent for sentinel lymph node detection and is the only FDA-approved agent for lymphatic mapping of solid tumors. Additional trials, including pediatric studies and trials in anal/rectal, endometrial, and cervical cancers, and others in various stages of execution, planning or consideration, are anticipated to provide additional data to potentially support greater medical adoption and expansion of the Lymphoseek opportunity.

We submitted our Marketing Authorization Application (MAA) for Lymphoseek to the European Medicines Agency (EMA) in December 2012. In September 2014, the Committee for Medicinal Products for Human Use (CHMP) adopted a positive opinion recommending marketing authorization for Lymphoseek for use in the EU in imaging and intraoperative detection of sentinel lymph nodes draining a primary tumor in adult patients with breast cancer, melanoma, or localized squamous cell carcinoma of the oral cavity. The CHMP's positive opinion was reviewed by the European Commission (EC), which has the authority to approve medicinal products for use in the 28 countries of the EU and generally follows the recommendations of the CHMP. The EC granted marketing authorization for Lymphoseek in the EU in November 2014. We recently completed manufacturing validation activities on a finished drug product contract manufacturing facility to support the Company’s supply chain, primarily in Europe. This facility will produce a reduced-mass vial for which we received approval from the EMA in September 2016. Our partner, SpePharm AG (an affiliate of Norgine BV), is currently completing the customary pre-launch market access activities to support commercial launch in the EU during the fourth quarter of 2016.

Lymphoseek – Ongoing Clinical Data and Licensing Background

In January 2016, we announced that the first pediatric patient was enrolled in a clinical study comparing Lymphoseek and vital blue dye (VBD) in a pediatric population of patients with melanoma, rhabdomyosarcoma, or other solid tumors. The study is designed to investigate how Lymphoseek compares with VBD in identifying lymph nodes as well as evaluate safety and tolerability in the pediatric population. Lymphoseek is currently approved for adult use only. Enrollment is currently planned at approximately six sites throughout the U.S. The first patient was enrolled by Jennifer Aldrink, M.D., Assistant Professor of Clinical Surgery at The Ohio State University College of Medicine and Director of Surgical Oncology, Division of Pediatric Surgery at Nationwide Children's Hospital in Columbus, Ohio. Primary goals of this prospective, open-label, multicenter study are to evaluate safety and tolerability of Lymphoseek in this subject population and determine the concordance of in vivo detection rates of Lymphoseek and of VBD in tissue excised and histologically confirmed as lymph nodes. In addition, the study is designed to measure other efficacy signals including assessment of the identified lymph node(s) to confirm: the presence/absence of tumor metastases; agent localization per tumor type; degree of localization (nodes per subject both intraoperatively and with

preoperative SPECT/CT); reverse concordance parameters; change of subject stage based on histopathology and descriptive assessment on change in treatment plan; and number of lymph nodes detected with Lymphoseek intraoperatively compared with preoperative SPECT/CT imaging.

In February 2016, we announced enrollment of the first patient in a clinical study evaluating Lymphoseek in women with known cervical cancer. The study, funded in part by a Fast Track SBIR grant from the National Institutes of Health (NIH), will assess the use of Lymphoseek in sentinel lymph node biopsy during cervical cancer surgery in support of the existing Lymphoseek label in lymphatic mapping. Enrollment is currently planned in up to six sites throughout the U.S. The first patient was enrolled by Michael M. Frumovitz, M.D., M.P.H., Associate Professor, Department of Gynecologic Oncology and Reproductive Medicine, principal investigator at The University of Texas MD Anderson Cancer Center. This multi-center, prospective, open-label study intends to enroll up to 40 women with International Federation of Gynecology and Obstetrics IA2-IIA1 staging. Subjects will receive a single dose of Lymphoseek administered peritumorally approximately 1-2 hours before surgery. The results are expected to report per-patient false negative rates and compare the pathology status of Lymphoseek-identified sentinel lymph nodes relative to the pathology status of non-sentinel lymph nodes in nodal staging of patients. Additionally, the study is expected to report sensitivity, negative predictive value, and accuracy.

In June 2016, we announced results from three investigator-initiated studies that demonstrate beneficial performance characteristics of Lymphoseek and positive comparative results versus commonly-used, non-receptor-targeted imaging agents. The data were presented by the investigators at the 2016 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging (SNMMI) in San Diego, CA.

In the presentation entitled, "Performance of Tc-99m tilmanocept when used alone is as or more effective in localizing sentinel nodes than sulfur colloid plus blue dye," Jonathan Unkart and Anne Wallace, M.D., Department of Surgery at the University of California San Diego (UCSD), described a retrospective evaluation of the rate of localization of Lymphoseek when used alone compared to sulfur colloid (SC), blue dye (BD) and SC plus BD. The study included results from 148 breast cancer patients evaluated in two prospective Phase 3 Lymphoseek clinical trials (data published in Annuls of Surgical Oncology 2013). SC and BD data was derived from a literature search presented at the SNMMI 2013 Annual Meeting including treatment groups of 17,814 SC alone, 12,821 BD alone and 19,627 SC+BD patients. Results show the following localization rates: Lymphoseek alone: 0.9865, SC alone: 0.9249, BD alone: 0.8294 and SC+BD: 0.9636. The authors' analysis suggests that Lymphoseek provided superior sentinel lymph node localization in breast cancer patients compared to the other non-targeting agents alone or in combination providing surgeons the option to use just a single agent.

The presentation, "Use of lymphoscintigraphy with Tc-99m tilmanocept does not affect the number of nodes removed during sentinel node biopsy (SLNB) in breast cancer," also presented by Dr. Unkart, shows data from a retrospective review evaluating whether there is a difference in the number of nodes removed using Lymphoseek during SLNB in patients who had a pre-operative imaging procedure called lymphoscintigraphy prior to SLNB versus those who only had intra-operative sentinel node (SN) identification. The results indicate that in breast cancer, identification and removal of SNs using lymphoscintigraphy (3.0 SNs) did not significantly alter the number of SNs removed during a SLNB procedure with no imaging (2.7 SNs). Lymphoseek's selective-targeting performance characteristic enables the utilization of only a single dose of Lymphoseek per patient irrespective of whether both lymphoscintigraphy and SLNB are performed. The authors concluded that by using Lymphoseek, lymphoscintigraphy imaging procedures may be eliminated in this patient population and may reduce health care cost without impacting patient outcomes.

The presentation entitled, "Rate of sentinel lymph node visualization in fatty breasts: Tc-99m Tilmanocept versus Tc-99m filtered sulfur colloid," describes results from a study at Emory University School of Medicine using Lymphoseek in patients with fatty breast tissue, a population that is known to be more difficult to localize nodes when performing SLNB. The results suggest that Lymphoseek more effectively visualized sentinel lymph nodes (SLNs) both on lymphoscintigraphy and during surgery compared to filtered sulfur colloids (Tc-SC) with 100% localization using Lymphoseek intraoperatively. Dr. Maryam Shahrzad, M.D. presented retrospective data compiled from 29 consecutive patients with early stage breast cancer where lymphoscintigraphy was performed using Tc-SC and 28 patients where lymphoscintigraphy was performed using Lymphoseek. Multiple patient variables were recorded. The Tc-SC cohort included 96% of patients with fatty breasts versus 89% in the Lymphoseek group. Statistically significant findings included: (1) in lymphoscintigraphy, SLN visualization occurred in 86% of the Lymphoseek group compared to 59% of the TC-SC group (p-value: 0.02); and (2) at surgery, 100% of patients in the Lymphoseek group showed a "hot" SLN compared to only 79% of patients in the Tc-SC group (p-value: 0.01).

These data further reinforce the beneficial clinical performance attributes of Lymphoseek. In addition, they support Lymphoseek's rapid adoption in sentinel lymph node biopsy procedures and its pre-surgical imaging utility for other solid tumors. We believe results from these and other performance-based studies will encourage surgeons to use Lymphoseek as they look to optimize outcome for their patients and improve patient experience.

Manocept Platform - Diagnostics and Therapeutics Background

Navidea's Manocept platform is predicated on the ability to specifically target the CD206 mannose receptor expressed on activated macrophages. Activated macrophages play important roles in many disease states and are an emerging target in many diseases where diagnostic uncertainty exists. This flexible and versatile platform serves as an engine for purpose-built molecules that may significantly impact patient care by providing enhanced diagnostic accuracy, clinical decision-making, and target-specific treatment. This disease-targeted drug platform provides the capability to utilize a breadth of diagnostic modalities, including SPECT, PET, intra-operative and/or optical-fluorescence detection, as well as delivery of therapeutic compounds that target macrophages, and their role in a variety of immune- and inflammation-based disorders. The Company's FDA-approved sentinel node/lymphatic mapping agent, Lymphoseek, is representative of the ability to successfully exploit this mechanism to develop powerful new products.

Impairment of the macrophage-driven disease mechanisms is an area of increasing focus in medicine. The number of people affected by all the inflammatory diseases combined is estimated at more than 40 million in the United States and perhaps 700 million worldwide, making macrophage-mediated diseases an area of remarkable clinical importance. There are many recognized disorders having macrophage involvement, including rheumatoid arthritis (RA), atherosclerosis/vulnerable plaque, Crohn's disease, systemic lupus erythematosis, KS, and others that span clinical areas in oncology, autoimmunity, infectious diseases, cardiology, central nervous system (CNS) diseases, and inflammation. Data from studies using agents from the Manocept platform in RA, KS and tuberculosis (TB) were published in a special supplement, Nature Outlook: Medical Imaging, in Nature's October 31, 2013 issue. The supplement included a White Paper by Navidea entitled "Innovations in receptor-targeted precision imaging at Navidea: Diagnosis up close and personal," focused on the Manocept platform.

Manocept Platform – Immuno-Diagnostics Clinical Data

In April 2016, we announced that based on a meeting with the FDA, we will begin the clinical trial development process for our intravenous (IV) injection protocols for use of tilmanocept in RA and other disease states. Over the past year Navidea conducted a series of meetings and communications with the FDA to gain clarity on a path to extend the current Lymphoseek investigational new drug (IND) application to support IV administration of tilmanocept. In parallel, the Company initiated its clinical development efforts and has already completed six required non-clinical animal studies for this new route of administration, submitted the summary results in a briefing package to the FDA, and secured NIH grants in RA and KS, worth up to $3.8 million to support further development through Phase 2 studies. Based upon the feedback from the latest meeting, Navidea expects to submit an IND amendment to the FDA that will allow initiation of Phase 1/2 IV studies of tilmanocept. The addition of this new route of administration would enable further development of tilmanocept in broader immunodiagnostic disease applications including RA and KS.

Rheumatoid Arthritis

Our efforts to exploit the involvement of macrophages in the natural history of many diseases has led us through our strategy of expanding the use of tilmanocept and open new market opportunities. Importantly, one of the largest defined market opportunities resides in early diagnosis and disease monitoring for rheumatoid arthritis or RA. RA can be hard to detect because it may begin with subtle symptoms such as achy joints or joint stiffness especially in the morning. Also, many diseases behave like RA early on; for example, gout and lupus. There is no single test that confirms an RA diagnosis. Current diagnostic tools such as x-rays, ultrasound and MRI are reasonable, but still fall short of being able to quantitatively measure inflammation and the underlying macrophage inflammatory component, which is a key driver of RA progression. Misdiagnosis results in billions of dollars being spent each year unnecessarily on therapies, which may also result in significant side effects.

In our primary market research, two aspects of the current unmet medical needs identified were early diagnosis and monitoring of disease progression and/or drug response. Early diagnosis and treatment improves outcomes. In patients with RA, joint damage occurs early, often within the first two years of the disease, and is irreversible. Additionally, once treatment is started, it becomes necessary to objectively monitor progression and measure how well a treatment is working or not.

Approximately 10 million patients in economically advantaged countries alone are diagnosed with RA, of which approximately half are misdiagnosed due in large part to a lack of an accurate and cost-effective means for early detection and differential diagnosis. Drilling further down, our primary market research suggests that early detection alone in the U.S. could add up to 300,000 procedures per year and disease monitoring could add up to another 700,000 procedures per year.

Our goals for the use of tilmanocept in RA are:

- reliable diagnosis of RA by imaging;
- early differential diagnosis of RA; and
- use in monitoring patient response to RA treatments.

Based on our preliminary work, we believe we can achieve all three diagnostic disease-managing elements with tilmanocept.

In June 2015, results from several pre-clinical Manocept studies in RA were presented at the EULAR 2015 European Congress of Rheumatology. The results of the studies, led by Wael Jarjour, M.D. and Thomas J. Rosol, D.V.M., Ph.D., of The Ohio State University Wexner Medical Center and College of Veterinary Medicine, respectively,

highlighted the potential of CD206-targeting Manocept constructs to detect immune-mediated inflammation in RA which could be used diagnostically, to monitor therapeutic efficacy, or as a potential therapeutic platform. The presentation showed results from synovial fluid and tissue acquired from RA patients for comparison to normal frozen archival tissue and synovial tissue procured from patients with osteoarthritis (OA). Tissues were probed with Manocept-Cy3, DAPI nuclear stain, and anti CD206-cyanine. Mononuclear cells were isolated from RA synovial fluid and analyzed by flow cytometry. Results demonstrated that archival synovial tissue and synovial fluid obtained from patients diagnosed with RA contain a significant population of macrophages that express high levels of the CD206 receptor. It was shown that these macrophages strongly co-localize Manocept-Cy3 and CD206 receptors. The degree of macrophage infiltration in tissue from healthy or osteoarthritic patients was significantly lower than in RA tissues. Additionally, in an in-vivo animal study, arthritis was induced in mice and was followed with intravenous injection of Manocept-Cy3 and epi-fluorescent imaging. Imaging results indicated that Manocept can be detected in inflamed joints in an in vivo animal model of RA.

In July 2015, we received an initial notice of award for a Fast Track SBIR grant from the NIH's National Institute of Arthritis and Musculoskeletal and Skin Diseases, to fund preclinical animal studies and a Phase 1/2 human clinical study examining the ability of Tc 99m tilmanocept to identify skeletal joints that are inflamed due to RA. RA is a chronic, progressive, systemic autoimmune disease characterized by inflammation of numerous skeletal joints. If not treated successfully, RA can lead to disability, disfigurement and premature death. The funds for this Fast Track grant were released in two parts, which together provide a total of $1.4 million in resources over two and a half years to achieve the specific aims and objectives of the grant. The first part provided $225,000 to support preclinical animal studies and to support activities needed to prepare for the Phase 1/2 clinical study. In July 2016, we

received notification of award of the second part of the grant for an additional $1.1 million that will support the Phase 1/2 study, the results of which are expected to confirm the safety and effectiveness of Tc 99m tilmanocept to identify skeletal joint inflammation due to RA.

In July 2016, we received Institutional Review Board (IRB) approval from the University of California, San Francisco (UCSF) School of Medicine for a clinical study examining the ability of tilmanocept to specifically identify active RA in pre-identified RA-affected joints. Additionally, Navidea has received Western Institutional Review Board (WIRB) approval to expand this study to other study sites at Navidea's discretion. This study has been designed as an open-label, Phase 1 clinical study of up to 18 individuals to investigate the ability of a subcutaneous injection of Tc 99m-tilmanocept to identify RA inflamed joints in active RA subjects by SPECT and SPECT/CT imaging. The study will enroll four cohorts of subjects: participants with active RA and arthritis-free individuals evaluating two different tilmanocept doses in each group. Results of this study will be used to determine tilmanocept's ability to localize in subjects with RA and show concordance with clinical symptoms, compare the intensity between the two dose groups, and compare localization between active RA and arthritis-free subjects. Study results will help to inform the trial design for follow-on studies. Two study sites are now open for enrollment and 17 or 18 subjects have been dosed and imaged.

In conjunction with the agreed submission of an IND amendment for IV administration of tilmanocept to the FDA, we expect to initiate a multi-center Phase 1/2 registrational trial employing IV administration to evaluate tilmanocept for the primary diagnosis of RA and to aid in the differential diagnosis of RA from other types of inflammatory arthritis before the end of 2016.

Cardiovascular Disease

In July 2015, we received a notice of award for a Phase 1 SBIR grant providing $322,000 from the National Heart Lung and Blood Institute, NIH. The study, currently ongoing in collaboration with Massachusetts General Hospital and Harvard Medical School, will examine the ability of Tc 99m tilmanocept to localize in high-risk atherosclerotic plaques. These specific plaques are rich in CD206 expressing macrophages and are at high risk for near term rupture resulting in myocardial infarctions, sudden cardiac death and strokes. The consequences of atherosclerosis and the cardiovascular disease that atherosclerosis causes, while severe in all populations of people, are particularly concentrated in human immunodeficiency virus (HIV)+ patients. Recently, it has been observed that CD206 expressing macrophages densely populate vulnerable plaques or thin cap fibroatheromas but not other kinds (i.e., calcified plaques) of atherosclerotic plaques. A primary goal for this grant involves an approved clinical investigation of up to 18 individuals with and without aortic and high risk coronary atherosclerotic plaques and with and without HIV infection to determine the feasibility of Tc 99m tilmanocept to image high risk plaque by SPECT/CT. Contrast with NaF18 is a parallel evaluation. Results have the potential to provide evidence of the potential of Tc 99m tilmanocept to accumulate in high risk morphology plaques, the ability to make preliminary comparisons of aortic Tc 99m tilmanocept uptake by SPECT/CT in each group, and to evaluate the ability of Tc 99m tilmanocept to identify the same aortic atherosclerotic plaques that are identified by contrast enhanced coronary computed tomography angiography and/or PET/CT.

In May 2016, we reported that the first subjects were dosed subcutaneously at Massachusetts General Hospital, and we have now completed enrollment in this study. Results are being analyzed and a manuscript has been submitted for publication.

Other Immuno-Diagnostic Applications

In July 2015, imaging results from the Manocept clinical trial in KS and other preclinical studies were presented at the 18th International Workshop on Kaposi's Sarcoma Herpesvirus (KSHV) and Related Agents. The clinical imaging

study, using Tc 99m tilmanocept in both HIV+ and HIV- patients suggests that KS tumor lesions, both cutaneous and suspected extra-cutaneous sites, can be easily visualized and mapped, demonstrating that this technique may potentially provide a means for routine patient assessment. The results also demonstrate that use of Manocept represents a potential therapeutic pathway for targeting tumor-associated macrophages (TAMs). Manocept agents are designed to target CD206, which is highly expressed on TAMs and the KS tumor itself. As a potential therapeutic, Manocept could be used as a precision vehicle to deliver payloads to tumor sites throughout the body. Five Human Herpes Virus8 positive (HHV8+) patients (4 HIV+, 1HIV-) were enrolled in the NAV3-12 study. Patients received a single subcutaneous injection of Tc 99m tilmanocept in the region of a cutaneous KS lesion and imaging was performed at 1, 4 and 24 hours post-injection to visualize localization of tilmanocept. Results represented by whole body SPECT/CT imaging scans from study patients were presented. Collectively, the scans show localization of tilmanocept specifically in KS and detected multiple cutaneous lesions in the extremities, as well as extra-cutaneous localization found in the nasopharynx, lymph nodes and brain. Results also indicate that KS lesions are anatomically linked in chains by and within the lymph ducts. The study concludes that both HIV+ and HIV- patients have pan-tumor expression of CD206, strongly suggests tilmanocept crosses the blood-brain barrier and that a Manocept-drug conjugate may have the potential as a therapeutic with high target effect and low off-target concerns. The data from these studies also suggest a novel theory on the genesis of KS in which KS arises from an HHV8 infected macrophage type cell and its interaction with the lymphatic system. This interaction provides the means for access of the KS through CD206 receptor for diagnosis, evaluation, and potential therapy using the Manocept platform.

In September 2015, we received an initial notice of award for a Fast Track SBIR grant providing for up to $1.8 million from the NIH’s National Cancer Institute to fund preclinical studies examining the safety of IV injection of Tc99m tilmanocept, a Manocept platform

product, followed by a clinical study providing the initial evaluation of the safety and efficacy of SPECT imaging studies with IV Tc99m tilmanocept to identify and quantify both skin- and organ-associated KS lesions in human patients. The grant is awarded in two parts with the potential for total grant money of up to $1.8 million over two and a half years. The first six-month funding segment of $300,000, which has already been awarded, is expected to enable Navidea to secure necessary collaborations and Institutional Review Board approvals. The second funding segment could provide for up to an additional $1.5 million to be used to accrue participants, perform the Phase 1/2 study and perform data analyses to confirm the safety and effectiveness of intravenously administered Tc99m tilmanocept. We have received IRB approval of the clinical protocol, and we plan to initiate a Phase 1/2 clinical study in KS during 2017.

Over the course of the last few years, management has provided periodic updates regarding the status of the NAV1800 development program we previously referred to as the RIGS® (radioimmunoguided surgery) program. During that time, our commercial evaluation of new clinical data caused us to question the viability of the monoclonal antibody initiative as it was originally envisioned, and we learned significantly more about tilmanocept, the underlying Manocept backbone, and the potential utility of tilmanocept in identifying TAMs, and their consequent potential utility in identifying multifocal tumor disease itself. To that end, we petitioned the NIH to repurpose the $1.5 million grant we were previously awarded towards the study of TAMs in colorectal cancer, and subsequently received confirmation of the acceptance of this repurposing. This repurposed grant now supports a Manocept-based diagnostic approach in patients with anal/rectal cancer and possibly colon cancer. We recognize this repurposing represents a major refocusing of the original NAV1800 initiative, but we are confident that this change represents the best course of action at this time towards benefiting patients afflicted with colorectal cancer and is one which is consistent with the excitement we are seeing on many fronts related to our work on the Manocept platform. However, there can be no assurance that if further clinical trials for this product proceed, that they will be successful, that the product will achieve regulatory approval, or if approved, that it will achieve market acceptance.

Macrophage Therapeutics Background

In January 2015, Navidea formed Macrophage Therapeutics, Inc. (MT), a majority-owned subsidiary that was formed specifically to further explore immune-therapeutic applications for the Manocept platform.

In February 2015, Navidea announced the appointment of leading experts to a newly formed scientific advisory board (SAB) to serve as a strategic resource to MT as MT looks to develop therapeutic applications for Navidea’s Manocept platform. The inaugural SAB consortium is comprised of world-renowned scientists and clinicians in the areas of oncology, immunology, autoimmune diseases and macrophage biology. The SAB will serve as an ongoing resource to provide counsel and guidance pertaining to the research, development, and clinical use of our Manocept technology in therapeutic applications.

In September 2015, MT announced that it had developed preliminary processes for producing the first two therapeutic Manocept immunoconstructs, MT-1001, designed to specifically target and kill activated CD206+ macrophages and MT-2001, designed to inhibit the inflammatory activity of activated CD206+ macrophages. These constructs are the result of the activities of Navidea’s clinical development and research group. MT-1001 and MT-2001 were developed from the Manocept platform technology and the efforts of Navidea’s development team and contain a similar chemical scaffold and targeting moieties designed to selectively target CD206+ macrophages. A payload of a therapeutic molecule is conjugated to each immunoconstruct through a linkage that will release the molecule within the targeted tissue: MT-1001 has doxorubicin, an anthracycline antitumor agent, conjugated to the Manocept backbone and MT-2001 has a potent anti-inflammatory agent conjugated to it. MT has contracted with an independent facility to produce sufficient quantities of MT-1001 and MT-2001 along with the concomitant analytical standards, to provide material for planned preclinical animal studies.

Manocept Platform – Immunotherapeutics Clinical Data

In March 2015, Navidea and MT announced that data from an ongoing human study indicated that the Manocept technology platform appears to have the ability to safely cross the blood brain barrier without losing its ability to deliver its payload to the intended target. Based on these data and on the advice of the Company's SAB, MT hopes to expand the SAB to include members with specific expertise in CNS diseases. The blood brain barrier has proven to be a significant obstacle to treating many diseases of the central nervous system. In an imaging study using the Manocept targeted delivery system, foci on the other side of the blood brain barrier were observed that strongly and specifically localized tilmanocept. Many of the leading diseases of the central nervous system such as Alzheimer's and Parkinson's diseases as well as autoimmune CNS diseases such as multiple sclerosis and ALS have pathologies that can in part be attributed to over-active macrophages, the target for Manocept delivery technology.

In July 2015, Navidea and MT announced that preclinical results in KS demonstrated that a cytotoxic drug, doxorubicin, linked to Manocept was targeted to and dose-dependently taken up in CD206+ KS tumor cells and TAMs and caused apoptotic death of the KS tumor cells and TAMs. The results were presented at the 18th International Workshop on KSHV and Related Agents by Michael S. McGrath, M.D., Ph.D., Professor, Departments of Laboratory Medicine, Pathology, and Medicine at UCSF. The study also shows that Cy3-Manocept and a Cy3-Manocept-doxorubicin conjugate quantitatively permitted the evaluation of tumor burden, tissue uptake of Manocept and tumor response to therapy in vitro and ex vivo, supporting the potential for the Manocept platform to be used not only diagnostically but as a precision targeted molecule to deliver payloads to tumor sites throughout the body. In summary, the data presented include evidence that:

- KS tissue based cells take up Cy3-Manocept or Cy3-Manocept-doxorubicin into both KS tumor cells and TAMs.
- Manocept conjugate uptake is dose and time dependent in CD206+ macrophages.
- Cy3-Manocept and Cy3-Manocept-doxorubicin bind to CD206 positive macrophages equivalently indicating that the linkage of a drug conjugate did not lessen the CD206 binding ability.
- Manocept-doxorubicin killed CD206 expres