INOVIO PHARMACEUTICALS, INC.
Form 10-Q
August 08, 2017

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

FORM 10-Q

x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2017

OR

.. TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE TRANSITION PERIOD FROM TO

COMMISSION FILE NO. 001-14888

INOVIO PHARMACEUTICALS, INC.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE	33-0969592
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

660 W. GERMANTOWN PIKE, SUITE 110
PLYMOUTH MEETING, PA 19462

(Address of principal executive offices) (Zip Code)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (267) 440-4200

SECURITIES REGISTERED PURSUANT TO SECTION 12(B) OF THE ACT:

COMMON STOCK, $0.001 PAR VALUE	NASDAQ
(Title of Class)	(Name of Each Exchange on Which Registered)

SECURITIES REGISTERED PURSUANT TO SECTION 12(G) OF THE ACT: NONE

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 x 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 x No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer x
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company ¨
	Emerging growth company ¨

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

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

The number of shares outstanding of the Registrant's Common Stock, $0.001 par value, was 90,227,174 as of August 4, 2017.

INOVIO PHARMACEUTICALS, INC.
FORM 10-Q

For the Quarterly Period Ended June 30, 2017

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Part I. Financial Information

Item 1. Financial Statements

INOVIO PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2017 (Unaudited)	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$23,860,637	$19,136,472
Short-term investments	68,138,619	85,629,412
Accounts receivable	7,522,548	15,821,511
Accounts receivable from affiliated entity	1,189,300	748,355
Prepaid expenses and other current assets	4,914,764	1,749,059
Prepaid expenses and other current assets from affiliated entity	1,251,730	1,512,424
Total current assets	106,877,598	124,597,233
Fixed assets, net	15,017,992	9,025,446
Investment in affiliated entity - GeneOne	14,612,344	16,052,065
Investment in affiliated entity - PLS	3,339,802	3,777,510
Intangible assets, net	6,817,855	7,628,394
Goodwill	10,513,371	10,513,371
Other assets	1,674,251	2,113,147
Total assets	$158,853,213	$173,707,166
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$16,477,761	$19,597,787
Accounts payable and accrued expenses due to affiliated entity	847,421	1,072,579
Accrued clinical trial expenses	7,188,751	6,368,389
Common stock warrants	1,363,637	1,167,614
Deferred revenue	548,690	14,762,720
Deferred revenue from affiliated entity	274,194	407,292
Deferred rent	681,544	446,646
Total current liabilities	27,381,998	43,823,027
Deferred revenue, net of current portion	205,938	317,808
Deferred revenue from affiliated entity, net of current portion	—	86,694
Deferred rent, net of current portion	7,560,867	5,926,424
Deferred tax liabilities	174,793	174,793
Total liabilities	35,323,596	50,328,746
Inovio Pharmaceuticals, Inc. stockholders' equity:		
Preferred stock	—	—
Common stock	77,634	74,062
Additional paid-in capital	589,890,620	556,718,356
Accumulated deficit	(467,715,568)	(434,838,235)
Accumulated other comprehensive income	1,180,662	1,327,968
Total Inovio Pharmaceuticals, Inc. stockholders' equity	123,433,348	123,282,151
Non-controlling interest	96,269	96,269
Total stockholders' equity	123,529,617	123,378,420
Total liabilities and stockholders' equity	$158,853,213	$173,707,166

See accompanying notes to unaudited condensed consolidated financial statements.

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INOVIO PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Revenues:				
Revenue under collaborative research and development arrangements	$16,358,316	$1,889,988	$20,646,902	$3,686,845
Revenue under collaborative research and development arrangements with affiliated entity	176,879	499,720	410,209	636,720
Grants and miscellaneous revenue	2,797,647	3,814,083	8,037,880	9,990,381
Grants and miscellaneous revenue from affiliated entity	1,079,282	—	1,693,318	—
Total revenues	20,412,124	6,203,791	30,788,309	14,313,946
Operating expenses:				
Research and development	23,878,751	19,630,801	48,421,255	37,819,961
General and administrative	6,169,106	5,799,530	13,936,695	11,171,143
Gain on sale of assets	—	(1,000,000)	—	(1,000,000)
Total operating expenses	30,047,857	24,430,331	62,357,950	47,991,104
Loss from operations	(9,635,733)	(18,226,540)	(31,569,641)	(33,677,158)
Other income (expense):				
Interest and other income, net	300,021	341,131	640,362	674,201
Change in fair value of common stock warrants, net	(312,500)	(113,775)	(196,023)	(520,024)
Gain (loss) on investment in affiliated entity	169,096	(705,527)	(1,439,721)	6,775,450
Net loss attributable to Inovio Pharmaceuticals, Inc.	$(9,479,116)	$(18,704,711)	$(32,565,023)	$(26,747,531)
Loss per common share—basic and diluted:				
Net loss per share attributable to Inovio Pharmaceuticals, Inc. stockholders	$(0.13)	$(0.26)	$(0.44)	$(0.37)
Weighted average number of common shares outstanding—basic and diluted	75,409,702	72,957,159	74,783,791	72,591,986

See accompanying notes to unaudited condensed consolidated financial statements.

INOVIO PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net loss	$(9,479,116)	$(18,704,711)	$(32,565,023)	$(26,747,531)
Other comprehensive income (loss):				
Unrealized gain (loss) on investment in affiliated entity	312,253	282,572	(437,708)	263,575
Unrealized gain on short-term investments	86,862	322,767	290,402	542,448
Comprehensive loss attributable to Inovio Pharmaceuticals, Inc.	$(9,080,001)	$(18,099,372)	$(32,712,329)	$(25,941,508)

See accompanying notes to unaudited condensed consolidated financial statements.

INOVIO PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Six Months Ended June 30,	
	2017	2016
Cash flows from operating activities:		
Net loss	$(32,565,023)	$(26,747,531)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	1,020,679	827,327
Amortization of intangible assets	810,539	556,554
Change in value of common stock warrants	196,023	520,025
Stock-based compensation	7,937,473	5,251,166
Amortization of premiums on investments	140,599	139,659
Loss on short-term investments	67,366	—
Deferred rent	1,869,341	(31,783)
Loss (gain) on investment in affiliated entity	1,439,721	(6,775,450)
Gain on sale of intangible assets	—	(1,000,000)
Changes in operating assets and liabilities:		
Accounts receivable	8,298,963	(3,032,891)
Accounts receivable from affiliated entity	(440,945)	—
Prepaid expenses and other current assets	(3,165,705)	(270,785)
Prepaid expenses and other current assets from affiliated entity	260,694	(1,271,605)
Other assets	438,896	(655,334)
Accounts payable and accrued expenses	(4,305,114)	(247,009)
Accrued clinical trial expenses	820,362	2,405,804
Accounts payable and accrued expenses due to affiliated entity	(225,158)	435,922
Deferred revenue	(14,325,900)	1,323,827
Deferred revenue from affiliated entity	(219,792)	(437,827)
Net cash used in operating activities	(31,946,981)	(29,009,931)
Cash flows from investing activities:		
Purchases of investments	(14,600,112)	(27,985,410)
Maturities of investments	32,173,342	27,662,695
Purchases of capital assets	(5,828,137)	(2,196,896)
Proceeds from sale of intangible assets	—	1,000,000
Purchase of intangible assets and other assets	—	(1,200,000)
Net cash provided by (used in) investing activities	11,745,093	(2,719,611)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of issuance costs	24,060,196	1,301,435
Proceeds from stock option and warrant exercises, net of tax payments	865,857	1,395,346
Expenses from other financing activities	—	(149,559)
Net cash provided by financing activities	24,926,053	2,547,222
Increase (decrease) in cash and cash equivalents	4,724,165	(29,182,320)
Cash and cash equivalents, beginning of period	19,136,472	57,632,693
Cash and cash equivalents, end of period	$23,860,637	$28,450,373
Supplemental disclosure of non-cash activities		
Common stock issued for purchase of intangible and other assets of Bioject	$—	$4,300,000
Change in amounts accrued for purchases of property and equipment	$1,185,087	$(110,136)
Lease incentive recorded as fixed assets and deferred rent	$—	$134,500

See accompanying notes to unaudited condensed consolidated financial statements.

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INOVIO PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Organization and Operations

Inovio Pharmaceuticals, Inc. (the “Company” or “Inovio”), a clinical stage biopharmaceutical company, develops active DNA immunotherapies and vaccines focused on preventing and treating cancers and infectious diseases. Inovio’s DNA-based immunotherapies, in combination with proprietary electroporation delivery devices are intended to generate robust immune responses, in particular T cells, to fight target diseases. Inovio’s synthetic products are based on its SynCon® immunotherapy design. The Company and its collaborators are currently conducting or planning clinical programs of its proprietary SynCon® immunotherapies for HPV-caused pre-cancers and cancers, influenza, prostate cancer, breast/lung/pancreatic cancer, hepatitis C virus ("HCV"), hepatitis B virus ("HBV"), HIV, Ebola, Middle East Respiratory Syndrome ("MERS") and Zika virus. The Company's partners and collaborators include MedImmune, LLC, The Wistar Institute, University of Pennsylvania, GeneOne Life Science Inc. ("GeneOne"), Regeneron Pharmaceuticals, Inc., Genentech, Inc., Plumbline Life Sciences, Inc., Drexel University, National Microbiology Laboratory of the Public Health Agency of Canada, National Institute of Allergy and Infectious Diseases (“NIAID”), United States Military HIV Research Program (“USMHRP”), U.S. Army Medical Research Institute of Infectious Diseases (“USAMRIID”), HIV Vaccines Trial Network (“HVTN”), and Defense Advanced Research Projects Agency (“DARPA”). Inovio was incorporated in Delaware in June 2001 and has its principal executive offices in Plymouth Meeting, Pennsylvania.

2. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of Inovio have been prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”) as contained in the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") for interim financial information and with instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The condensed consolidated balance sheet as of June 30, 2017 and the condensed consolidated statements of operations, condensed consolidated statements of comprehensive loss and the condensed consolidated statements of cash flows for the three and six months ended June 30, 2017 and 2016, are unaudited, but include all adjustments (consisting of normal recurring adjustments) that the Company considers necessary for a fair presentation of the financial position, results of operations and cash flows for the periods presented. The results of operations for the three and six months ended June 30, 2017 shown herein are not necessarily indicative of the results that may be expected for the year ending December 31, 2017, or for any other period. These unaudited financial statements, and notes thereto, should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2016, included in the Company's Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (“SEC”) on March 15, 2017. The balance sheet at December 31, 2016 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The Company has evaluated subsequent events after the balance sheet date of June 30, 2017 through the date it filed these unaudited condensed consolidated financial statements with the SEC.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

3. Critical Accounting Policies

Revenue Recognition.

The Company recognizes revenues when all four of the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery of the products and/or services has occurred; (3) the selling price is fixed or determinable; and (4) collectability is reasonably assured.

Grant revenue

The Company receives non-refundable grants under available government programs. Government grants towards current expenditures are recorded as revenue when there is reasonable assurance that the Company has complied with all conditions necessary to receive the grants, collectability is reasonably assured, and as the expenditures are incurred.
License fee and milestone revenue

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The Company has adopted a strategy of co-developing or licensing its gene delivery technology for specific genes or specific medical indications. Accordingly, the Company has entered into collaborative research and development agreements and has received third-party funding for pre-clinical research and clinical trials. Agreements that contain multiple elements are analyzed to determine whether the deliverables within the agreement can be separated or whether they must be accounted for as a single unit of accounting in accordance with the FASB's Accounting Standards Update (“ASU”) No. 2009-13, Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements. Analyzing the arrangement to identify deliverables requires the use of judgment, and each deliverable may be an obligation to deliver services, a right or license to use an asset, or another performance obligation. The delivered item(s) were considered a separate unit of accounting if all of the following criteria were met: (1) the delivered item(s) has value to the customer on a standalone basis; (2) there is objective and reliable evidence of the fair value of the undelivered item(s); and (3) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the Company's control. If these criteria were not met, the deliverable was combined with other deliverables in the arrangement and accounted for as a combined unit of accounting.

Arrangement consideration is allocated at the inception of the agreement to all identified units of accounting based on their relative selling price. The relative selling price for each deliverable is determined using vendor specific objective evidence (“VSOE”) of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence of selling price exists, the Company uses its best estimate of the selling price for the deliverable. The amount of allocable arrangement consideration is limited to amounts that are fixed or determinable. The consideration received is allocated among the separate units of accounting, and the applicable revenue recognition criteria are applied to each of the separate units. Changes in the allocation of the sales price between delivered and undelivered elements can impact revenue recognition but do not change the total revenue recognized under any agreement.

Upfront license fee payments are recognized upon delivery of the license if facts and circumstances dictate that the license has standalone value from the undelivered items, the relative selling price allocation of the license is equal to or exceeds the upfront license fee, persuasive evidence of an arrangement exists, the price to the collaborator is fixed or determinable, and collectability is reasonably assured. Upfront license fee payments are deferred if facts and circumstances dictate that the license does not have standalone value. The determination of the length of the period over which to defer revenue is subject to judgment and estimation and can have an impact on the amount of revenue recognized in a given period.

The Company applies ASU No. 2010-17, Revenue Recognition (Topic 605): Milestone Method of Revenue Recognition (“Milestone Method”). Under the Milestone Method, the Company will recognize consideration that is contingent upon the achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone is substantive in its entirety. A milestone is considered substantive when it meets all of the following criteria:

1. The consideration is commensurate with either the entity's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone,
2. The consideration relates solely to past performance, and
3. The consideration is reasonable relative to all of the deliverables and payment terms within the arrangement.

A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity's performance or on the occurrence of a specific outcome resulting from the entity's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved and (iii) that would result in additional payments being due to the Company.

Business Combinations. The cost of an acquired business is assigned to the tangible and identifiable intangible assets acquired and liabilities assumed on the basis of the estimated fair values at the date of acquisition. The Company assesses fair value, which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, using a variety of methods including, but not limited

to, an income approach and a market approach such as the estimation of future cash flows of acquired business and current selling prices of similar assets. Fair value of the assets acquired and liabilities assumed, including intangible assets, are measured based on the assumptions and estimations with regards to the variable factors such as the amount and timing of future cash flows for the asset or liability being measured, appropriate risk-adjusted discount rates, nonperformance risk, or other factors that market participants would consider. Upon acquisition, the Company determines the estimated economic lives of the acquired intangible assets for amortization purposes, which are based on the underlying expected cash flows of such assets. Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that is not individually identified and separately recognized. Actual results may vary from projected results and assumptions used in the fair value assessments.
Research and Development Expenses. Since the Company's inception, most of its activities have consisted of research and development efforts related to developing electroporation delivery technologies and DNA immunotherapies and vaccines.

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Research and development expenses consist of expenses incurred in performing research and development activities including salaries and benefits, facilities and other overhead expenses, clinical trials, contract services and other outside expenses. Research and development expenses are charged to operations as they are incurred. These expenses result from the Company's independent research and development efforts as well as efforts associated with collaborations and licensing arrangements. The Company reviews and accrues clinical trial expense based on work performed, which relies on estimates of total costs incurred based on patient enrollment, completion of studies and other events. The Company follows this method since reasonably dependable estimates of the costs applicable to various stages of a research agreement or clinical trial can be made. Accrued clinical trial costs are subject to revisions as trials progress. Revisions are charged to expense in the period in which the facts that give rise to the revision become known. Historically, revisions have not resulted in material changes to research and development expense; however a modification in the protocol of a clinical trial or cancellation of a trial could result in a charge to the Company's results of operations.

4. Principles of Consolidation

These unaudited condensed consolidated financial statements include the accounts of Inovio Pharmaceuticals, Inc. and its subsidiaries. In conjunction with the acquisition in June 2009 of VGX Pharmaceuticals Inc. (the “Merger”), the Company acquired a majority interest in VGX Animal Health, Inc. and certain shares in GeneOne Life Science Inc. ("GeneOne"), a publicly-traded company in South Korea. The Company consolidates Genetronics, Inc. (a wholly-owned subsidiary of Inovio Pharmaceuticals, Inc.), VGX Pharmaceuticals and its subsidiary VGX Animal Health, GENEOS Therapeutics, Inc., and records a non-controlling interest for the 15% of VGX Animal Health it did not own as of June 30, 2017 and December 31, 2016. The Company's investment in GeneOne, which is recorded as investment in affiliated entity within the condensed consolidated balance sheets, is accounted for at fair value on a recurring basis, with changes in fair value recorded on the condensed consolidated statements of operations within gain (loss) on investment in affiliated entity. All intercompany accounts and transactions have been eliminated upon consolidation.

Variable Interest Entities

The FASB issued authoritative guidance that requires companies to perform a qualitative analysis to determine whether a variable interest in another entity represents a controlling financial interest in a variable interest entity. A controlling financial interest in a variable interest entity is characterized by having both the power to direct the most significant activities of the entity and the obligation to absorb losses or the right to receive benefits of the entity. This guidance requires on-going reassessments of variable interests based on changes in facts and circumstances. The Company determined that none of the entities with which the Company currently conducts business and collaborations are variable interest entities except VGXI, Inc., a wholly-owned subsidiary of GeneOne. The Company determined that it is not the primary beneficiary as the Company does not have voting control or other forms of control over the operations and decision making of VGXI and therefore is not required to consolidate VGXI. The Company continues to assess its variable interests and has determined that no significant changes have occurred as of June 30, 2017.

5. Impact of Recently Issued Accounting Standards

The recent accounting pronouncements below may have a significant effect on the Company's financial statements. Recent accounting pronouncements that are not anticipated to have an impact on or are unrelated to the Company's financial condition, results of operations, or related disclosures are not discussed.

Accounting Standards Update (“ASU”), No. 2016-09- In March 2016, the FASB issued ASU No. 2016-09, Compensation-Stock Compensation - Improvements to Employee Share-Based Payment Accounting. The new guidance 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. The amendments in this standard were effective for the Company's annual year and first fiscal quarter beginning on January 1, 2017 with early adoption permitted. The Company adopted this guidance as of January 1, 2017 using a modified retrospective transition method. As a result of the adoption of this standard, the Company elected to change its policy from estimating forfeitures to recognizing forfeitures when they occur and as a result recorded an adjustment of $312,000 to accumulated deficit with a corresponding offset to additional paid-in-capital at January 1, 2017. The Company also reversed a deferred tax asset related to the balance of unrecognized excess tax benefits of $1.1 million,

with an offsetting adjustment to the valuation allowance.

ASU, No. 2016-02- In February 2016, the FASB issued ASU No. 2016-02, Leases. Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: (a) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and (b) a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. The ASU will be effective for the Company beginning January 1, 2019 with early adoption permitted. The

Company is currently evaluating the impact of the application of this accounting standard update on its financial statements and related disclosures.

ASU, No. 2014-09- In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers ("Topic 606"), which amended the existing accounting standards for revenue recognition, outlines a comprehensive revenue recognition model and supersedes most current revenue recognition guidance. The new standard requires a company to recognize revenue upon transfer of goods or services to a customer at an amount that reflects the expected consideration to be received in exchange for those goods or services. The amended guidance defines a five-step approach for recognizing revenue, which will require a company to use more judgment and make more estimates than under the current guidance. The amended guidance will be effective for the Company starting in the 2018 fiscal year, including interim periods. The new standard allows for two methods of adoption: (a) full retrospective adoption, meaning the standard is applied to all periods presented, or (b) modified retrospective adoption, meaning the cumulative effect of applying the new standard is recognized as an adjustment to the opening retained earnings balance. The Company currently plans on applying the modified retrospective method upon adoption in the first quarter of 2018. The Company is continuing to assess the potential impact that Topic 606 may have on its financial statements and related disclosures with respect to its collaboration agreement with MedImmune. The evaluation of variable consideration, and in particular, milestone payments due from MedImmune will require further judgment to assess whether to include them in the transaction price, which could accelerate revenue recognized under ASC 606 compared to ASC 605. However, the Company does not expect this to have a material impact on its financial position and results of operations. The Company is also continuing to assess the potential impact that Topic 606 may have with respect to its various grant agreements, and currently does not expect any impact on its financial position and results of operations.

6. Investments

Investments at June 30, 2017 and December 31, 2016 consisted of mutual funds, United States corporate debt securities and an equity investment in the Company's affiliated entity Plumbline Life Sciences, Inc. ("PLS"). The Company classifies all investments as available-for-sale, as the sale of such investments may be required prior to maturity to implement management strategies. Available-for-sale securities are recorded at fair value, based on current market valuations. Unrealized gains and losses on available-for-sale securities are excluded from earnings and are reported as a separate component of other comprehensive loss until realized. Realized gains and losses are included in non-operating other income (expense) on the condensed consolidated statement of operations and are derived using the specific identification method for determining the cost of the securities sold. During the three and six months ended June 30, 2017 and 2016, a minimal amount of net realized gain (loss) on investments was recorded. The Company assessed each of its investments on an individual basis to determine if any decline in fair value was other-than-temporary. Interest and dividends on investments classified as available-for-sale are included in interest and other income, net, in the condensed consolidated statements of operations. As of June 30, 2017, the Company had 37 available-for-sale securities in a gross unrealized loss position of which 3 with an aggregate total unrealized loss of $20,000 were in such position for longer than 12 months.

The following is a summary of available-for-sale securities as of June 30, 2017 and December 31, 2016:

	As of June 30, 2017			
	Contractual Maturity (in years)	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Market Value
Mutual funds	---	$43,085,855	$ 194,051	$ (212,400)	$ 43,067,506
US corporate debt securities	Less than 2	25,118,191	6,967	(54,045)	25,071,113
Investment in affiliated entity (PLS)	---	—	3,339,802	—	3,339,802
Total investments		$68,204,046	$ 3,540,820	$ (266,445)	$ 71,478,421

	As of December 31, 2016			
	Contractual Maturity (in years)	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Market Value

Mutual funds	---	$60,883,065	$ 94,374	$ (387,693)	$ 60,589,746
US corporate debt securities	Less than 2	25,098,122	6,853	(65,309)	25,039,666
Investment in affiliated entity (PLS)	---	—	3,777,510	—	3,777,510
Total investments		$85,981,187	$ 3,878,737	$ (453,002)	$ 89,406,922

7. Marketable Securities and Fair Value Measurements

The guidance regarding fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets that are accessible at the measurement date; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurements. The Company reviews the fair value hierarchy classification on a quarterly basis. Changes in the ability to observe valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy. The Company did not have any transfer of assets and liabilities between Level 1, Level 2 and Level 3 of the fair value hierarchy during the six months ended June 30, 2017 or 2016.

The following table presents the Company's assets and liabilities that are measured at fair value on a recurring basis, and are determined using the following inputs as of June 30, 2017:

	Fair Value Measurements at June 30, 2017			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Unobservable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	$1,391,349	$1,391,349	$—	$—
Mutual funds	43,067,506	—	43,067,506	—
US corporate debt securities	25,071,113	—	25,071,113	—
Investment in affiliated entities	17,952,146	17,952,146	—	—
Total Assets	$87,482,114	$19,343,495	$68,138,619	$—
Liabilities:				
Common stock warrants	$1,363,637	$—	$—	1,363,637
Total Liabilities	$1,363,637	$—	$—	$1,363,637

The following table presents the Company's assets and liabilities that are measured at fair value on a recurring basis, and are determined using the following inputs as of December 31, 2016:

	Fair Value Measurements at December 31, 2016			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Unobservable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	$10,300,813	$10,300,813	$—	$—
Mutual funds	60,589,746	—	60,589,746	—
US corporate debt securities	25,039,666	—	25,039,666	—
Investment in affiliated entities	19,829,575	19,829,575	—	—
Total Assets	$115,759,800	$30,130,388	$85,629,412	$—
Liabilities:				
Common stock warrants	$1,167,614	$—	$—	$1,167,614

Total Liabilities	$1,167,614	$—	$—	$ 1,167,614

Level 1 assets at June 30, 2017 consisted of money market funds held by the Company that are valued at quoted market prices, as well as the Company's investments in GeneOne and PLS. The Company accounts for its investment of 1,644,155

common shares of GeneOne based on the closing price of the shares on the Korean Stock Exchange on the applicable balance sheet date. The Company accounts for its investment of 395,758 common shares in PLS as an available-for sale security with a fair value based on the closing price of the shares on the Korea New Exchange (KONEX) Market on the applicable balance sheet date. The Company elected the fair value option in conjunction with the investment in GeneOne at the inception of the investment; therefore, changes in the fair value of the investment are reflected as other income (expense) in the condensed consolidated statements of operations. The Company did not elect the fair value option for the investment in PLS at the inception of the investment, but rather recorded the investment under the equity method until its ownership interest dropped below 20% in June 2015 and, accordingly, began recording the investment under the cost method using the carryover basis from the equity method of zero. Once shares of PLS began trading on the KONEX, the Company classified the investment as available-for-sale and began recording the investment at fair value with changes in fair value reflected in other comprehensive income (loss).

Level 2 assets at June 30, 2017 consisted of US corporate debt securities and mutual funds held by the Company that are initially valued at the transaction price and subsequently valued, at the end of each reporting period, typically utilizing market observable data. The Company obtains the fair value of its Level 2 assets from a professional pricing service, which may use quoted market prices for identical or comparable instruments, or inputs other than quoted prices that are observable either directly or indirectly. The professional pricing service gathers quoted market prices and observable inputs from a variety of industry data providers. The valuation techniques used to measure the fair value of the Company's Level 2 financial instruments were derived from non-binding market consensus prices that are corroborated by observable market data, quoted market prices for similar instruments, or pricing models such as discounted cash flow techniques. The Company validates the quoted market prices provided by the primary pricing service by comparing the service's assessment of the fair values of the Company's investment portfolio balance against the fair values of the Company's investment portfolio balance obtained from an independent source.

There were no Level 3 assets held as of June 30, 2017. Level 3 assets held at December 31, 2016 consisted of the second warrant received by the Company to purchase shares of common stock of OncoSec Medical Incorporated (“OncoSec”), in connection with the second amendment to the Asset Purchase Agreement between the Company and OncoSec signed in March 2012. This warrant to purchase 150,000 shares of common stock of OncoSec was not exercised and expired in March 2017. This warrant had zero value as of December 31, 2016. The first warrant to purchase 50,000 shares of common stock of OncoSec at an exercise price of $24.00 per share also was not exercised, and expired in September 2016.

Level 3 liabilities at June 30, 2017 consisted of common stock warrant liabilities associated with warrants to purchase the Company's common stock issued in March 2013. If unexercised, the warrants will expire in September 2018. During the six months ended June 30, 2017 and 2016, none of these warrants were exercised.

As of June 30, 2017, the Company had a $1.4 million common stock warrant liability. The Company reassesses the fair value of the common stock warrants at each reporting date utilizing a Black-Scholes pricing model. Inputs used in the pricing model include estimates of stock price volatility, expected warrant life and risk-free interest rate. The Company develops its estimates based on historical data. The assumptions used to estimate the fair value of common stock warrants at June 30, 2017 are presented below:

Risk-free interest rate	1.24%
Expected volatility	57%
Expected life in years	1.2
Dividend yield	—

Changes in these assumptions as well as fluctuations in the Company's stock price on the valuation date can have a significant impact on the fair value of the common stock warrant liability. As a result of these calculations, the Company recorded an increase in fair value of $313,000 and $196,000 for the three and six months ended June 30, 2017, respectively, and an increase in fair value of $108,000 and $514,000 for the three and six months ended June 30, 2016, respectively. The change in fair value is reflected in the Company's condensed consolidated statements of operations as a component of change in fair value of common stock warrants.

The following table presents the changes in fair value of the Company's Level 3 financial liabilities for the six months ended June 30, 2017:

Balance at December 31, 2016	$1,167,614
Increase attributable to change in fair value of common stock warrants	196,023
Balance at June 30, 2017	$1,363,637

8. Business Combination

On April 29, 2016, the Company acquired all of the assets of Bioject Medical Technologies Inc. ("Bioject"), including its needle-free injection technology, products and intellectual property. The transaction, which was accounted for as a business combination, provided the Company with further opportunities in device development. The Company paid Bioject aggregate consideration of $5.5 million, consisting of $4.3 million in shares of the Company's common stock and $1.2 million in cash upon closing.

The acquisition consideration was allocated to the estimated fair values of the assets acquired as follows:

Developed technology	$3,800,000
Customer-related intangible assets	1,000,000
Trademarks	200,000
Covenants not-to-compete	100,000
Goodwill	400,000
Total purchase consideration	$5,500,000

The fair value of the acquired intangible assets was estimated based on the discounted cash flow method that estimated the present value of a revenue stream derived from the licensing of the Bioject technology. These projected cash flows were discounted to present value using a discount rate of 14%. The fair value of the developed technology is being amortized on a straight-line basis over the estimated useful life of 15 years. The fair value of the remaining intangible assets acquired is being amortized on a straight-line basis over the estimated useful life of between 2-5 years. The excess of the acquisition date consideration over the fair values assigned to the assets acquired was recorded as goodwill. The goodwill resulting from the acquisition consists primarily of the synergies expected from combining the technologies and know-how of Bioject with the Company's existing business. This includes synergies expected from combining Bioject's needle-free injection technology with the Company's existing electroporation delivery devices.

9. Goodwill and Intangible Assets

The following sets forth the goodwill and intangible assets by major asset class:

		June 30, 2017			December 31, 2016		
	Useful Life (Yrs)	Gross	Accumulated Amortization	Net Book Value	Gross	Accumulated Amortization	Net Book Value
Non-Amortizing:							
Goodwill(a)		$10,513,371	$—	$10,513,371	$10,513,371	$—	$10,513,371
Amortizing:							
Patents	8 – 17	5,802,528	(5,651,470)	151,058	5,802,528	(5,618,854)	183,674
Licenses	8 – 17	1,323,761	(1,176,235)	147,526	1,323,761	(1,161,861)	161,900
CELLECTRA®(b)	5 – 11	8,106,270	(7,038,569)	1,067,701	8,106,270	(6,825,028)	1,281,242
GHRH(b)	11	335,314	(256,105)	79,209	335,314	(240,264)	95,050
Bioject(c)	2 – 15	5,100,000	(983,889)	4,116,111	5,100,000	(562,222)	4,537,778
Other(d)	18	4,050,000	(2,793,750)	1,256,250	4,050,000	(2,681,250)	1,368,750
Total intangible assets		24,717,873	(17,900,018)	6,817,855	24,717,873	(17,089,479)	7,628,394
Total goodwill and intangible assets		$35,231,244	$(17,900,018)	$17,331,226	$35,231,244	$(17,089,479)	$18,141,765

(a) Goodwill was recorded from the Inovio AS acquisition in January 2005, the acquisition of VGX Pharmaceuticals in June 2009 and the acquisition of Bioject in April 2016 for $3.9 million, $6.2 million and $400,000, respectively.

(b)

CELLECTRA® and GHRH are developed technologies which were recorded from the acquisition of VGX Pharmaceuticals.

(c) Bioject intangible assets represent the estimated fair value of developed technology and intellectual property which were recorded from the Bioject asset acquisition.

(d) Other intangible assets represent the estimated fair value of acquired intellectual property from the Inovio AS acquisition.

Aggregate amortization expense on intangible assets for the three and six months ended June 30, 2017 was $404,000 and $811,000, respectively. Aggregate amortization expense on intangible assets for the three and six months ended June 30, 2016 was $347,000 and $557,000, respectively. Estimated aggregate amortization expense for each of the five succeeding fiscal years is $808,000 for the remainder of fiscal year 2017, $1.3 million for 2018, $1.1 million for 2019, $547,000 for 2020, $520,000 for 2021 and $2.6 million for 2022 and the years thereafter.

10. Stockholders' Equity

The following is a summary of the Company's authorized and issued common and preferred stock as of June 30, 2017 and December 31, 2016:

	Authorized	Issued	Outstanding as of June 30, 2017	Outstanding as of December 31, 2016
Common Stock, par value $0.001 per share	600,000,000	77,633,816	77,633,816	74,062,370
Series C Preferred Stock, par value $0.001 per share	1,091	1,091	23	23

Common Stock

In June 2016, the Company entered into an At-the-Market Equity Offering Sales Agreement (the "Sales Agreement") with an outside placement agent (the "Placement Agent") to sell shares of its common stock with aggregate gross proceeds of up to $50.0 million, from time to time, through an "at-the-market" equity offering program under which the Placement Agent will act as sales agent. Under the Sales Agreement, the Company will set the parameters for the sale of shares, including the number of shares to be issued, the time period during which sales are requested to be made, limitation on the number of shares that may be sold in any one trading day and any minimum price below which sales may not be made. The Sales Agreement provides that the Placement Agent will be entitled to compensation for its services in an amount equal to 2.0% of the gross proceeds from the sales of shares sold through the Placement Agent under the Sales Agreement. The Company has no obligation to sell any shares under the Sales Agreement, and may at any time suspend solicitation and offers under the Sales Agreement.

During the six months ended June 30, 2017, the Company sold a total of 2,917,725 shares of common stock under the Sales Agreement. The sales were made at a weighted average price of $8.41 per share resulting in net proceeds to the Company of $24.1 million. As of June 30, 2017, the Company has sold an aggregate of 3,576,473 shares of common stock under the Sales Agreement for net proceeds of $30.4 million. Accordingly, the Company may sell up to an additional $19.0 million in shares of its common stock under the Sales Agreement.

Warrants

The Company accounts for registered common stock warrants issued in March 2013 under the authoritative guidance on accounting for derivative financial instruments indexed to, and potentially settled in, a company's own stock, on the understanding that in compliance with applicable securities laws, the registered warrants require the issuance of registered securities upon exercise and do not sufficiently preclude an implied right to net cash settlement. The Company classifies registered warrants on the condensed consolidated balance sheet as a current liability which is revalued at each balance sheet date subsequent to the initial issuance. Determining the appropriate fair-value model and calculating the fair value of registered warrants requires considerable judgment, including estimating stock price volatility and expected warrant life. The Company uses the Black-Scholes pricing model to value the registered warrants. The Company develops its estimates based on historical data. A small change in the estimates used may have a relatively large change in the estimated valuation. Changes in the fair market value of the warrants are reflected in the condensed consolidated statement of operations as "Change in fair value of common stock warrants."

The following table summarizes the warrants outstanding as of June 30, 2017 and December 31, 2016:

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Issued in Connection With:	Exercise Price	Expiration Date	As of June 30, 2017 Number of Warrants Outstanding	Common Stock Warrant Liability	As of December 31, 2016 Number of Warrants Outstanding	Common Stock Warrant Liability
March 2013 financing	$ 3.17	September 12, 2018	284,091	$ 1,363,637	284,091	$ 1,167,614
Total			284,091	$ 1,363,637	284,091	$ 1,167,614

Stock Options

The Company has one stock-based incentive plan, the 2016 Omnibus Incentive Plan (the "2016 Incentive Plan"), pursuant to which the Company may grant stock options and restricted stock awards to employees, directors and consultants.

The 2016 Incentive Plan was approved by the Company's stockholders on May 13, 2016. The maximum number of shares of the Company’s common stock available for issuance over the term of the 2016 Incentive Plan may not exceed 6,000,000 shares, provided that commencing with the first business day of each calendar year beginning January 1, 2018, such maximum number of shares shall be increased by 2,000,000 shares of common stock unless the Board determines, prior to January 1 for any such calendar year, to increase such maximum amount by a fewer number of shares or not to increase the maximum amount at all for such year. At June 30, 2017, there were 6,000,000 shares of common stock reserved for issuance upon exercise of incentive awards granted and to be granted at future dates under the 2016 Incentive Plan. At June 30, 2017, the Company had 4,074,919 shares of common stock available for future grant under the 2016 Incentive Plan, 858,915 shares of unvested restricted stock units and options to purchase 1,063,916 shares of common stock outstanding under the 2016 Incentive Plan. The awards granted and available for future grant under the 2016 Incentive Plan generally vest over three years and have a maximum contractual term of ten years. The 2016 Incentive Plan terminates by its terms on March 9, 2026.

The Amended and Restated 2007 Omnibus Incentive Plan (the "2007 Incentive Plan") was adopted on March 31, 2007 and terminated by its terms on March 31, 2017. At June 30, 2017, the Company had 476,829 shares of unvested restricted stock units and options to purchase 6,476,778 shares of common stock outstanding under the 2007 Incentive Plan. The awards granted under the 2007 Incentive Plan generally vest over three years and have a maximum contractual term of ten years.

At June 30, 2017, the Company had options outstanding to purchase 348,069 shares of common stock under the VGX Equity Compensation Plan. The terms and conditions of the options outstanding under this plan remain unchanged.

11. Net Loss Per Share

Basic net loss per share is computed by dividing the net loss for the year by the weighted average number of shares of common stock outstanding during the year. Diluted net loss per share is calculated in accordance with the treasury stock method and reflects the potential dilution that would occur if securities or other contracts to issue common stock were exercised or converted to common stock. Since the effect of the assumed exercise of common stock options and other convertible securities was anti-dilutive for all periods presented, basic and diluted loss per share are the same.

The following table summarizes potential shares of common stock that were excluded from the diluted net loss per share calculation because of their anti-dilutive effect for the three and six months ended June 30, 2017 and 2016:

Common Stock Equivalents	Three and Six Months Ended June 30, 2017	Three and Six Months Ended June 30, 2016
Options to purchase common stock	7,888,763	6,694,478
Warrants to purchase common stock	284,091	284,091
Restricted stock units	1,335,744	749,335
Convertible preferred stock	8,456	8,456

Total	9,517,054	7,736,360

12. Stock-Based Compensation

The Company incurs stock-based compensation expense related to restricted stock units and stock options. The fair value of restricted stock is determined by the closing price of the Company's common stock reported on the NASDAQ Global Market on the date of grant. The Company estimates the fair value of stock options granted using the Black-Scholes option pricing model. The Black-Scholes option pricing model was developed for use in estimating the fair value of traded options, which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly

subjective assumptions, including the expected stock price volatility and expected option life. The Company amortizes the fair value of the awards on a straight-line basis over the requisite vesting period of the awards. Expected volatility is based on historical volatility. The expected life of options granted is based on historical expected life. The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant. The dividend yield is based on the fact that no dividends have been paid historically and none are currently expected to be paid in the foreseeable future. Upon adoption of ASU 2016-09 on January 1, 2017, the Company elected to remove the forfeiture rate from the calculation and recorded a cumulative catch-up adjustment to accumulated deficit with a corresponding offset to additional paid-in-capital of $312,000. Previously, the forfeiture rate was based on historical data and the Company recorded stock-based compensation expense only for those awards that were expected to vest.

The weighted average assumptions used in the Black-Scholes model for employees and directors are presented below:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Risk-free interest rate	1.97%	0.95%	2.22%	0.91%
Expected volatility	73%	76%	73%	76%
Expected life in years	6.0	5.0	6.0	5.0
Dividend yield	—	—	—	—
Forfeiture rate	—	7%	—	7%

Total employee and director stock-based compensation expense recognized in the condensed consolidated statements of operations for the three and six months ended June 30, 2017 was $2.4 million and $7.7 million, respectively, of which $1.2 million and $3.5 million was included in research and development expenses, respectively, and $1.2 million and $4.2 million was included in general and administrative expenses, respectively.

Total employee and director stock-based compensation expense recognized in the condensed consolidated statements of operations for the three and six months ended June 30, 2016 was $2.0 million and $4.9 million, respectively, of which $1.0 million and $2.7 million was included in research and development expenses, respectively, and $973,000 and $2.2 million was included in general and administrative expenses, respectively.

At June 30, 2017, there was $8.6 million of total unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.1 years.

The weighted average grant date fair value per share, calculated using the Black-Scholes option pricing model, was $4.67 and $4.39 for employee and director stock options granted during the three and six months ended June 30, 2017, respectively, and $6.07 and $4.47 for employee and director stock options granted during the three and six months ended June 30, 2016, respectively.

At June 30, 2017, there was $7.7 million of total unrecognized compensation expense related to unvested restricted stock units, which is expected to be recognized over a weighted-average period of 2.2 years.

The weighted average grant date fair value per share was $7.14 and $6.70 for restricted stock units granted during the three and six months ended June 30, 2017, respectively, and $9.33 and $7.28 for restricted stock units granted during the three and six months ended June 30, 2016, respectively.

The fair value of options granted to non-employees at the measurement dates were estimated using the Black-Scholes pricing model. Total stock-based compensation expense for options granted to non-employees for the three and six months ended June 30, 2017 was $118,000 and $249,000, respectively. Total stock-based compensation expense for options granted to non-employees for the three and six months ended June 30, 2016 was $103,000 and $300,000, respectively.

13. Related Party Transactions

GeneOne Life Sciences

On May 26, 2015, the Company entered into a Collaborative Development Agreement with GeneOne to co-develop a DNA vaccine for MERS (Middle East Respiratory Syndrome) through Phase 1 clinical trials. Under the terms of the agreement, GeneOne will be responsible for funding all preclinical and clinical studies through Phase 1. In return,

GeneOne will receive up to 35% milestone-based ownership interest in the MERS immunotherapy upon achievement of the last milestone event of completion of the Phase 1 safety and immunogenicity study. The collaborative research program shall terminate upon the completion of activities under the development plan, unless sooner terminated.

In January 2016, the Company and Gene One entered into a First Amendment to the May 2015 Collaborative Development Agreement to expand the agreement to test and advance the Company's DNA-based vaccine for preventing and treating Zika virus. GeneOne will be responsible for funding all preclinical and clinical studies through Phase 1. In return, GeneOne will receive up to 35% milestone-based ownership interest in the Zika immunotherapy upon achievement of the last milestone event of the completion of the Phase 1 safety and immunogenicity study. All other agreement terms remain the same.

On September 23, 2014, the Company entered into a Collaborative Development Agreement with GeneOne to co-develop an Ebola vaccine through Phase 1 clinical trials. In July 2015, the Company amended the Agreement with an effective date of April 2015 to change control of development in return for the Company's payment of certain expenses relating to GeneOne's contribution to the clinical trials.

On October 7, 2011, the Company entered into a Collaborative Development and License Agreement (the "Hep Agreement") with GeneOne. Under the Hep Agreement, as originally executed, the Company and GeneOne agreed to co-develop the Company's SynCon® therapeutic vaccines for hepatitis B and C infections (the "Hep Products"). Under the terms of the Hep Agreement, GeneOne will receive marketing rights for the Hep Products in Asia, excluding Japan, and in return will fully fund IND-enabling and initial Phase 1 and 2 clinical studies with respect to the Products. The Company will receive from GeneOne payments based on the achievement of clinical milestones and royalties based on sales of the Hep Products in the licensed territories, retaining all commercial rights to the Products in all other territories. On August 21, 2013, the Company amended the Hep Agreement to grant back to the Company the SynCon® therapeutic vaccines targeting hepatitis B, along with all associated rights, from the collaboration in return for certain remuneration including a percentage of license fees. On October 7, 2013, the Company further amended the Hep Agreement to in part provide exclusive patent rights to IL-28 technology for use with the Hep Products in Asia, excluding Japan. The Hep Agreement shall terminate upon the later of the expiration or abandonment of the last patent that is a component of the rights or 20 years after the effective date.

On March 24, 2010, the Company entered into a Collaboration and License Agreement (the "GeneOne Agreement") with GeneOne. Under the GeneOne Agreement, the Company granted GeneOne an exclusive license to the Company's SynCon® universal influenza vaccine delivered with electroporation to be developed in certain countries in Asia (the "Product"). As consideration for the license granted to GeneOne, the Company received an upfront payment of $3.0 million, and will receive research support, annual license maintenance fees and royalties on net Product sales. The Company recorded the $3.0 million as deferred revenue from affiliated entity, and will recognize it as revenue over the eight year expected period of the Company's performance obligation. In addition, contingent upon achievement of clinical and regulatory milestones, the Company will receive development payments over the term of the GeneOne Agreement. The GeneOne Agreement also provides the Company with exclusive rights to supply devices for clinical and commercial purposes (including single use components) to GeneOne for use in the Product. The term of the GeneOne Agreement commenced upon execution and will extend on a country by country basis until the last to expire of all Royalty Periods for the territory (as such term is defined in the GeneOne Agreement) for any Product in that country, unless the GeneOne Agreement is terminated earlier in accordance with its provisions as a result of breach, by mutual agreement, or by GeneOne's right to terminate without cause upon prior written notice. One of the Company's directors, Dr. David B Weiner, acts as a consultant to GeneOne.

For the three and six months ended June 30, 2017, the Company recognized revenue from GeneOne of $155,000 and $322,000, respectively, which consisted of licensing and other fees from the influenza and Zika collaborations. Operating expenses recorded from transactions with GeneOne for the three and six months ended June 30, 2017 include $772,000 and $1.2 million, respectively, primarily related to biologics manufacturing. For the three and six months ended June 30, 2016, the Company recognized revenue from GeneOne of $463,000 and $576,000, respectively, which consisted of licensing and other fees from the influenza and Zika collaborations. Operating expenses recorded from transactions with GeneOne for the three and six months ended June 30, 2016 include $1.1 million and $1.3 million, respectively, primarily related to biologics manufacturing. At June 30, 2017 and December 31, 2016, the Company had an accounts receivable balance of $149,000 and $441,000, respectively, and an accounts payable and accrued liability balance of $41,000 and $401,000, respectively, related to GeneOne and its subsidiaries. At June 30, 2017 and December 31, 2016, $389,000 and $571,000, respectively, of prepayments made to GeneOne were classified as long-term other assets on the condensed consolidated balance sheet.

Plumbline Life Sciences, Inc.

In May 2014, the Company's 85% owned subsidiary VGX Animal Health entered into an agreement for the sale of its animal health assets to Plumbline Life Science, Inc. ("PLS"). The assets transferred included an exclusive license with the Company for animal applications of its growth hormone-releasing hormone ("GHRH") technology and animal DNA vaccines plus a non-exclusive license to the Company's electroporation delivery systems. In return, VGX Animal Health received $2.0 million in cash, of which $1.0 million was received in May 2015 and the remainder in May 2016, and 465,364 shares of PLS, of which the Company received 395,758 shares or approximately 16.8% of PLS's common stock.

During each of the years ended December 31, 2016 and 2015, VGX Animal Health distributed the $1.0 million cash received to its shareholders, of which $850,000 was received by the Company and $150,000 was paid to minority shareholders in each year.

One of the Company's directors, Dr. David B Weiner, acts as a consultant to PLS.

As of June 30, 2017 the Company accounts for its ownership interest in PLS under the accounting guidance for investments considered available-for-sale as described in Accounting Standards Codification (ASC) 320 - Investments - Debt and Equity Securities. The original carrying value of the Company's investment in PLS was $0. On July 28, 2015, PLS registered its common shares on the Korea New Exchange (KONEX) Market. The total carrying value of the Company's investment in PLS was $3.3 million as of June 30, 2017. The fair value is based on the market value of the 395,758 common shares owned, as determined based on the closing price of the common shares on the KONEX on the date of determination. The changes in carrying value of PLS are recorded in the condensed consolidated statements of comprehensive loss as an unrealized gain (loss) on investment in affiliated entity.

In August 2016, the Company licensed a veterinary vaccine for foot and mouth disease (FMD) to PLS. PLS will fund all development activities for this FMD vaccine. The Company will receive milestone payments as well as royalties on product sales from PLS for commercial rights to this FMD synthetic vaccine in Asia, excluding Japan.

For the three and six months ended June 30, 2017, the Company recognized revenue from PLS of $21,000 and $88,000, respectively. For the three and six months ended June 30, 2016, the Company recognized revenue from PLS of $37,000 and $61,000, respectively. At June 30, 2017 and December 31, 2016, the Company had an accounts receivable balance of $243,000 and $155,000, respectively, related to PLS.

The Wistar Institute

One of the Company's directors, Dr. David B Weiner, is the Executive Vice President and Director of the Vaccine Center of The Wistar Institute ("Wistar").

On March 16, 2016, the Company entered into collaborative research agreements with Wistar for preventive and therapeutic DNA-based immunotherapy applications and products developed by Dr. Weiner and Wistar for the treatment of cancers and infectious diseases. Under the terms of the agreement, the Company will reimburse Wistar for all direct and indirect costs incurred in the conduct of the collaborative research, not to exceed $3.1 million during the five-year term of the agreement. The Company will have the exclusive right to in-license new intellectual property developed under the agreement.

In December 2016 the Company announced the award of a $6.1 million sub-grant through Wistar (funded by the Bill & Melinda Gates Foundation) to develop a DNA-based monoclonal antibody against the Zika infection.

The Company is also a collaborator with Wistar on an Integrated Preclinical/Clinical AIDS Vaccine Development (IPCAVD) grant from the National Institute of Allergy and Infectious Diseases (NIAID), awarded in 2015.

For the three and six months ended June 30, 2017, the Company recognized revenue from Wistar of $1.1 million and $1.7 million, respectively, related to work performed on research sub-contract agreements. There was no revenue recognized from Wistar for the three and six months ended June 30, 2016. Operating expenses recorded from Wistar for the three and six months ended June 30, 2017 were $485,000 and $1.0 million, respectively, related to the collaborative research agreements and sub-contract agreements related to the DARPA Ebola grant (see Note 15). Operating expenses recorded from the collaborative research agreements with Wistar for the three and six months ended June 30, 2016 were $80,000. At June 30, 2017 and December 31, 2016, the Company had an accounts receivable balance of $797,000 and $152,000, respectively, and an accounts payable and accrued liability balance of $807,000 and $671,000, respectively, related to Wistar.

14. Commitments and Contingencies

San Diego Leases

In April 2013, the Company entered into a lease for office space located in San Diego, California. In June 2015, the Company amended the lease for this space to increase the total leased space and occupy the entire building. The commencement of the amended lease was in January 2016 and increased monthly lease payments by approximately $13,000. The Company has capitalized $822,000 of tenant improvements within fixed assets on the condensed consolidated balance sheet related to this additional space, and has recorded a corresponding increase to deferred rent.

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In October 2016, the Company entered into an office lease (the “new Lease”) for a second property located in San Diego, California. The total space under the new Lease is approximately 51,000 square feet. The Company is using the facility for office, manufacturing and research and development purposes. The term of the new Lease commenced on June 1, 2017. The initial term of the new Lease is ten years, with a right to terminate on November 30, 2023, subject to specified conditions.

The base rent adjusts periodically throughout the term of the new Lease, with monthly payments ranging from $0 to $95,000, with a portion of the rent abated for certain periods during the first two years of the initial term. In addition, the Company is obligated to reimburse the landlord its share of operating and other expenses, and has paid a security deposit of $95,000. As of June 30, 2017, the Company has capitalized $2.2 million of reimbursable tenant improvements to the new office which has been recorded as a leasehold improvement within fixed assets on the condensed consolidated balance sheet, offset by a corresponding amount recorded in deferred rent.

Plymouth Meeting Lease and Sublease

In March 2014, the Company entered into a lease (the "Lease") with a publicly owned real estate investment trust for office space located in Plymouth Meeting, Pennsylvania. The Company occupied the space in June 2014. The initial term of the Lease is 11.5 years and the Company plans to continue to use the space for office purposes.

The base rent adjusts periodically throughout the 11.5 year term of the Lease, with monthly payments ranging from $0 to $58,000. In addition, the Company is obligated to reimburse the landlord its share of operating and other expenses and a property management fee, and has paid a security deposit of $49,000. In July 2015, the Company amended the Lease to increase the total leased space. The commencement of the amended Lease was in the first quarter of 2016 and increased monthly lease payments by approximately $16,000.

In June 2017, the Company entered into a sublease (the “Sublease”) for additional space in its current office in Plymouth Meeting, Pennsylvania. The total additional space subject to the Sublease is approximately 30,000 square feet, which the Company intends to use for office purposes. The Sublease will commence on October 1, 2017 and end on June 30, 2027. The base rent adjusts periodically throughout the term of the Sublease, with monthly payments ranging from $75,000 to $90,000. In addition, the Company is obligated to reimburse the sub-landlord its share of operating and other expenses.

In June 2017, the Company entered into a second amendment to the Lease to extend the lease term and term of the Sublease through December 31, 2029. In connection with the second amendment, the Company will pay the landlord an additional security deposit of $75,000. The Company has capitalized $933,000 of tenant improvements to the Plymouth Meeting office within fixed assets on the condensed consolidated balance sheet, offset by a corresponding amount recorded in deferred rent.

The Company's future minimum lease payments under all non-cancelable operating leases as of June 30, 2017 are as follows:

Remainder of 2017	$1,095,000
2018	3,176,000
2019	3,612,000
2020	3,818,000
2021	3,918,000
Thereafter	23,994,000
Total	$39,613,000

In the normal course of business, the Company is a party to a variety of agreements pursuant to which they may be obligated to indemnify the other party. It is not possible to predict the maximum potential amount of future payments under these types of agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. Historically, payments made by us under these types of agreements have not had a material effect on our business, consolidated results of operations or financial condition.

15. Collaborative Agreements

MedImmune

On August 7, 2015, the Company entered into a license and collaboration agreement with MedImmune, the global biologics research and development arm of AstraZeneca. Under the agreement, MedImmune acquired exclusive rights to the Company's INO-3112 immunotherapy, which targets cancers caused by human papillomavirus (HPV) types 16 and 18.

MedImmune made an upfront payment of $27.5 million to the Company in September 2015 and has agreed to make additional future development, regulatory and commercial event-based payments totaling up to $700 million. MedImmune will fund all development costs associated with INO-3112 immunotherapy. The Company is entitled to receive up to mid-single to double-digit tiered royalties on INO-3112 product sales. Within the broader collaboration, the Company and MedImunne will attempt to develop up to two additional DNA-based cancer vaccine products not included in the Company's current product pipeline, which MedImmune will have the exclusive rights to develop and commercialize. The Company has assessed event-based payments under the authoritative guidance for research and development milestones and determined that none of the event-based payments represent a milestone under the milestone method of accounting.

The Company identified the deliverables at the inception of the agreement. The Company has determined that the license to INO-3112, the license for the research collaboration products with related research and development services and the product development services for INO-3112 individually represent separate units of accounting because each deliverable has standalone basis. The Company considered the provisions of the multiple-element arrangement guidance in determining whether the deliverables outlined above have standalone basis and thus should be treated as separate units of accounting. The Company determined that the license for INO-3112, the license for the research collaboration products with related research and development services, and the product development services for INO-3112 have standalone basis and represent separate units of accounting because the rights conveyed permit MedImmune to perform all efforts necessary to complete development, commercialize and begin selling the product upon regulatory approval. In addition, MedImmune has the appropriate development, regulatory and commercial expertise with products similar to the product licensed under the agreement and has the ability to engage third parties to manufacture the product allowing MedImmune to realize the value of the license without receiving any of the remaining deliverables. MedImmune can also sublicense its license rights to third parties. Also, the Company determined that the product development services for INO-3112 represents an individual unit of accounting as MedImmune could perform such services and/or could acquire these on a separate basis. The best estimated selling prices for these units of accounting were determined based on market conditions, the terms of comparable collaborative agreements for similar technology in the pharmaceutical and biotechnology industry, the Company's pricing practices and pricing objectives and the nature of the research and development services to be provided. While market data and the cost-to-recreate method under the cost approach were considered throughout the valuation process, ultimately, the estimated selling prices of the licenses were determined utilizing two forms of the relief from royalty method under the income approach. The arrangement consideration was allocated to the deliverables based on the relative selling price method.

The amount allocable to the delivered unit or units of accounting is limited to the amount that is considered fixed and determinable and is not contingent upon the delivery of additional items or meeting other specified performance conditions. Based on the results of the Company's analysis, the $27.5 million up-front payment was allocated as follows: $15.0 million to the product license to INO-3112 and $12.5 million for the license to the research collaboration products and related research and developments services. The amount allocated to the license for INO-3112 was recognized as revenue under collaborative research and development arrangements during the year ended December 31, 2015 as this was determined to be earned upon the granting of the license and delivery of the related knowledge and data. The remaining amount related to the research collaboration products and related research and development services was recognized as revenue under collaborative research and development arrangements during the three months ended June 30, 2017, upon selection of the first research collaboration product candidate by MedImmune. The Company believes that no substantive value related to the research collaboration products license and research services was transferred to MedImmune prior to their selection of the first research collaboration product since there was no economic benefit from the research unless such product candidate was selected. Therefore, the Company believes the license for the research collaboration products was delivered and the research services were completed upon the selection of the product candidate by MedImmune in June 2017 (i.e. exercise of an option). The Company will recognize revenues associated with the product development services for INO-3112 as revenues under collaborative arrangements as the related services are performed and according to the relative selling price method of the allocable arrangement consideration. During the three and six months ended June 30, 2017, the Company recognized revenues of $14.2 million and $14.5 million from MedImmune, respectively. During the three and six

months ended June 30, 2016, the Company recognized revenues of $307,000 and $697,000 from MedImmune, respectively. As of June 30, 2017, the Company had an accounts receivable balance of $538,000, related to the Agreement.

Roche

In September 2013, the Company entered into a Collaborative, License, and Option Agreement with Roche. The parties agreed to co-develop multi-antigen DNA immunotherapies targeting prostate cancer and hepatitis B.

On November 14, 2014, Roche provided notice to the Company that it would be partially terminating the agreement with respect to the development of the Company's DNA immunotherapy targeting prostate cancer. The termination was effective in February 2015. All of Roche's rights to the Company's DNA immunotherapy targeting prostate cancer, including the right to license the product to other parties, have been returned to the Company.

On July 28, 2016, Roche provided notice to the Company that it would be discontinuing the agreement and its development of INO-1800, the Company's DNA immunotherapy against the hepatitis B virus. The termination was effective in October 2016. All of Roche's rights to INO-1800, including the right to license the product to other parties, have been returned to the Company. In February 2017, the Company received full payment of $8.5 million from Roche for its past and future obligations associated with the termination of the agreement.

The Company identified the deliverables at the inception of the agreement. The Company determined that the license to the targets, the option right to license additional vaccines, research and development services, manufacturing and drug supply, and participation in the joint steering committee individually represent separate units of accounting because each deliverable has standalone value. The amount allocable to the delivered unit or units of accounting using the best estimated selling price is limited to the amount that is considered fixed and determinable and is not contingent upon the delivery of additional items or meeting other specified performance conditions. Based on the results of the Company's analysis, the $10.0 million up-front payment was allocated as follows: $8.4 million to the license to the targets, $1.5 million to the option right and $155,000 to the joint steering committee obligation. The amounts allocated to the licenses for the targets was recognized as revenue in 2013 as these were determined to be earned upon the granting of the license and delivery of the related knowledge and data. The Company recognized revenues associated with research and development services and manufacturing and drug supply as revenues under collaborative arrangements as the related services were performed and according to the relative selling price method of the allocable arrangement consideration. During the three and six months ended June 30, 2017, the Company recognized revenues of $2.1 million and $6.1 million from Roche, respectively. During the three and six months ended June 30, 2016, the Company recognized revenues of $1.6 million and $3.0 million from Roche, respectively. During the three months ended June 30, 2017, $2.1 million was recognized as revenue based on the satisfaction of a condition in the termination agreement during the period.

DARPA- Ebola

In April 2015, the Company received a grant from the Defense Advanced Research Projects Agency ("DARPA") to lead a collaborative team to develop multiple treatment and prevention approaches against Ebola. The consortium, led by the Company, is taking a multi-faceted approach to develop products to prevent and treat Ebola infection. The award covers pre-clinical development costs as well as good manufacturing practice manufacturing costs and the Phase 1 clinical study costs. The funding period is over two years and covers a base award of $19.6 million and an option award of $24.6 million, which was exercised in September 2015. The development proposal includes a second option of $11.1 million to support additional product supply and clinical development activities. The options are contingent upon the successful completion of certain pre-clinical development milestones. During the three and six months ended June 30, 2017, the Company recognized revenues of $2.7 million and $7.8 million, respectively, from DARPA related to the grant. During the three and six months ended June 30, 2016, the Company recognized revenues of $3.7 million and $8.2 million, respectively, from DARPA related to the grant. As of June 30, 2017, the Company had a deferred revenue and accounts receivable balance of $648,000 and $7.0 million, respectively, related to the DARPA grant.

16. Subsequent Events

On July 25, 2017, the Company closed an underwritten public offering of 12,500,000 shares of the Company's common stock at a public offering price of $6.00 per share. The net proceeds to the Company, after deducting the underwriters' discounts and commissions and other estimated offering expenses, were $70.2 million. In addition, the Company granted the underwriters a 30 day option to purchase up to 1,875,000 additional shares of its common stock on the same terms and conditions.

Subsequent to June 30, 2017, the Company sold 19,681 shares of common stock under its Sales Agreement for net proceeds of $156,000. The sales were made at a weighted average price of $8.07 per share.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This report contains forward-looking statements, as defined in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" or "continue," the negative of such terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially. Although we believe that the expectations reflected in the forward-looking statements are reasonable based on our current expectations and projections, we cannot guarantee future results, levels of activity, performance or achievements. Moreover, neither we, nor any other person, assume responsibility for the accuracy and completeness of the forward-looking statements. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any of the forward-looking statements after the filing of this Quarterly Report to conform such statements to actual results or to changes in our expectations. Statements made herein are as of the date of the filing of this Quarterly Report with the SEC and should not be relied upon as of any subsequent date. We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made.

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes and other financial information appearing elsewhere in this Quarterly Report and our audited consolidated financial statements and related notes for the year ended December 31, 2016 included in our Annual Report on Form 10-K filed with the SEC on March 14, 2017 (our "2016 Annual Report"). Readers are also urged to carefully review and consider the various disclosures made by us that attempt to advise interested parties of the factors that affect our business, including without limitation the disclosures made in Item 1A of Part II of this Quarterly Report under the Caption "Risk Factors" and under the captions "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Risk Factors" and in our audited consolidated financial statements and related notes included in our 2016 Annual Report and the risk factors included in our Prospectus Supplement filed with the SEC on July 20, 2017.

Risk factors that could cause actual results to differ from those contained in the forward-looking statements include but are not limited to: our history of losses; our lack of products that have received regulatory approval; uncertainties inherent in clinical trials and product development programs, including but not limited to the fact that pre-clinical and clinical results may not be indicative of results achievable in other trials or for other indications, that the studies or trials may not be successful or achieve desired results, that pre-clinical studies and clinical trials may not commence, have sufficient enrollment or be completed in the time periods anticipated, that results from one study may not necessarily be reflected or supported by the results of other similar studies, that results from an animal study may not be indicative of results achievable in human studies, that clinical testing is expensive and can take many years to complete, that the outcome of any clinical trial is uncertain and failure can occur at any time during the clinical trial process, and that our electroporation technology and DNA vaccines may fail to show the desired safety and efficacy traits in clinical trials; the availability of funding; the ability to manufacture vaccine candidates; the availability or potential availability of alternative therapies or treatments for the conditions targeted by us or our collaborators, including alternatives that may be more efficacious or cost-effective than any therapy or treatment that we and our collaborators hope to develop; our ability to receive development, regulatory and commercialization event-based payments under our collaborative agreements; whether our proprietary rights are enforceable or defensible or infringe or allegedly infringe on rights of others or can withstand claims of invalidity; and the impact of government healthcare proposals.

General

Inovio is developing active DNA immunotherapies and vaccines focused on treating and preventing cancers and infectious diseases. Our DNA-based immunotherapies, in combination with our proprietary electroporation delivery devices, are intended to generate robust immune responses, in particular T cells, to fight target diseases. In September 2015, data was published in the medical journal The Lancet from a controlled Phase 2 clinical trial in which we

generated significant, functional antigen-specific T cells that correlated to clinically relevant efficacy against HPV-associated cervical dysplasia (precancer). In June 2017, we began a Phase 3 clinical trial of our product candidate VGX-3100 for the treatment of cervical dysplasia.

Our novel SynCon® immunotherapy design has shown the ability to help break the immune system's tolerance of cancerous cells. Our SynCon® product design approach is also intended to facilitate cross-strain protection against known and new unmatched strains of pathogens, such as influenza. Given the recognized role of CD8+ killer T cells in eliminating cancerous or infected cells from the body and the published results from our Phase 2 clinical trial, we believe that our active immunotherapies may play an important role in helping fight multiple cancers and infectious diseases. Human data to date have shown a favorable safety profile of our DNA immunotherapies delivered using electroporation.

We or our collaborators are currently conducting or planning clinical studies of our proprietary SynCon® immunotherapies for HPV-caused pre-cancers (including cervical, anal and vulvar neoplasia), HPV-caused cancers (head and neck and cervical), prostate cancer, breast/lung/pancreatic cancer, hepatitis C virus ("HCV"), hepatitis B virus ("HBV"), HIV, Ebola, Middle East Respiratory Syndrome ("MERS") and Zika virus.

Our corporate strategy is to advance and protect our differentiated immunotherapy platform and use its unique capabilities to design and develop an array of cancer and infectious disease immunotherapy and vaccine products. We aim to advance products through to commercialization. We continue to leverage third-party resources through collaborations and partnerships, including product license agreements. Our partners and collaborators include MedImmune, LLC, The Wistar Institute, University of Pennsylvania, GeneOne Life Science Inc., Regeneron Pharmaceuticals, Inc., Genentech, Inc., Plumbline Life Sciences, Inc., Drexel University, National Microbiology Laboratory of the Public Health Agency of Canada, National Institute of Allergy and Infectious Diseases ("NIAID"), United States Military HIV Research Program ("USMHRP"), U.S. Army Medical Research Institute of Infectious Diseases ("USAMRIID"), HIV Vaccines Trial Network ("HVTN"), and Defense Advanced Research Projects Agency ("DARPA").

All of our product candidates are in the research and development phase. We have not generated any revenues from the sale of any products, and we do not expect to generate any such revenues for at least the next several years. We earn revenue from license fees and milestone revenue, collaborative research and development agreements, grants and government contracts. Our product candidates will require significant additional research and development efforts, including extensive preclinical and clinical testing. All product candidates that we advance to clinical testing will require regulatory approval prior to commercial use, and will require significant costs for commercialization. We may not be successful in our research and development efforts, and we may never generate sufficient product revenue to be profitable.

Recent Developments

In August 2016, we incorporated a 100%-owned subsidiary, GENEOS Therapeutics, Inc., or GENEOS, to develop and commercialize neo-antigen based personalized cancer therapies. While we pursue our SynCon® immunotherapy design to break tolerance and create cancer products targeting shared tumor specific antigens, GENEOS will exclusively focus on leveraging our DNA immunotherapy technology platform to advance the field of patient-specific neo-antigen therapies. We believe that our DNA-based platform is well-suited for advancing individualized therapies due to its rapid product design and manufacturing benefits, its ability to combine multiple neo-antigens into formulations, and its generation of potent killer T cell responses that are needed to drive clinical efficacy.

On June 8, 2017, we announced that we commenced our Phase 3 clinical program for VGX-3100 for the treatment of HPV-related cervical pre-cancer. We have satisfied the FDA's request for information relating to our CELLECTRA® 5PSP delivery device, resulting in the FDA removing the clinical hold on this program. We are currently actively recruiting patients for the Phase 3 trial.

In February 2017, we announced that we entered into a collaboration and license agreement (the "ApolloBio License Agreement") providing ApolloBio Corporation with the exclusive right to develop and commercialize VGX-3100 within Greater China (China, Hong Kong, Macao, Taiwan). The ApolloBio License Agreement provides for potential inclusion of the Republic of Korea in the licensed territory three years following the effective date. Under the ApolloBio License Agreement, ApolloBio will fund all clinical development costs within the licensed territory, and will pay us up to $20.0 million based upon the achievement of specified regulatory milestones in the United States, China and Korea, and double-digit royalties on net sales of VGX-3100. Under a separate common stock purchase agreement (the "ApolloBio Equity Agreement"), ApolloBio has agreed to purchase shares of our common stock upon the satisfaction of specified closing conditions. The agreements are subject to the People's Republic of China (PRC) regulatory, ApolloBio Board and shareholder approvals, and will be deemed effective upon receiving such approvals. Upon the ApolloBio License Agreement and the ApolloBio Equity Agreement being deemed effective, we will receive the following from ApolloBio:

• $15.0 million in upfront payments under the ApolloBio License Agreement; and

• up to $35.0 million under the ApolloBio Equity Agreement as payment for shares of our common stock at a pre-determined price per share of $8.20.

As of June 30, 2017, we had an accumulated deficit of $467.7 million. We expect to continue to incur substantial operating losses in the future due to our commitment to our research and development programs, the funding of preclinical studies, clinical trials and regulatory activities and the costs of general and administrative activities.

Critical Accounting Policies

There have been no significant changes to our critical accounting policies since December 31, 2016. For a description of critical accounting policies that affect our significant judgments and estimates used in the preparation of our consolidated financial statements, refer to Item 7 in Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 2 to our Consolidated Financial Statements contained in our 2016 Annual Report.

Adoption of Recent Accounting Pronouncements

Information regarding recent accounting pronouncements is contained in Note 5 to the Condensed Consolidated Financial Statements, included in this Quarterly Report.

Results of Operations

Revenue. We had total revenue of $20.4 million and $30.8 million for the three and six months ended June 30, 2017, respectively, as compared to $6.2 million and $14.3 million for the three and six months ended June 30, 2016, respectively. Revenue primarily consists of revenue under collaborative research and development arrangements, grants and government contracts.

Revenue under collaborative research and development arrangements, including arrangements with affiliated entities, was $16.5 million and $21.1 million for the three and six months ended June 30, 2017, respectively, as compared to $2.4 million and $4.3 million for the three and six months ended June 30, 2016, respectively. The increase for the three-month period year over year was primarily due to an increase in revenue recognized from MedImmune as the previously deferred revenue from the up-front payment received in September 2015 and other deferred amounts totaling $13.8 million were recognized during the three months ended June 30, 2017 upon selection of the first cancer research collaboration product candidate by MedImmune. The increase for the six-month period year over year was primarily due to the increase in revenue recognized from MedImmune of $13.8 million as well as an increase in revenue recognized from Roche of $3.1 million. In February 2017, we received full payment of $8.5 million from Roche for its past and future obligations associated with the termination of the Collaborative, License, and Option Agreement.

During the three and six months ended June 30, 2017, we recorded grant and miscellaneous revenue, including arrangements with affiliated entities, of $3.9 million and $9.7 million, respectively, as compared to $3.8 million and $10.0 million for the three and six months ended June 30, 2016, respectively. The increase for the three-month period year over year was primarily due to revenue recognized from our two sub-contracts with Wistar totaling $1.1 million, partially offset by a decrease in revenue recognized from our DARPA Ebola grant of $925,000. The decrease for the six-month period year over year was primarily due to a decrease in revenue recognized from our DARPA sub-contract for the treatment of infectious diseases and DARPA Ebola grant of $1.4 million and $453,000, respectively, partially offset by new revenue recognized from our two sub-contracts with Wistar totaling $1.7 million.

Research and development expenses. Research and development expenses for the three and six months ended June 30, 2017, were $23.9 million and $48.4 million, respectively, as compared to $19.6 million and $37.8 million for the three and six months ended June 30, 2016, respectively. The increase for the three-month period year over year was primarily due to a $2.3 million increase in expenses related to increased employee headcount to support clinical trials and partnerships and $1.4 million of expenses related to our DARPA Ebola grant. The increase for the six-month period year over year was primarily due to an increase of $5.3 million in expenses related to increased employee headcount to support clinical trials and partnerships, an increase of $3.2 million in expenses related to our various clinical trials including our recently commenced Phase 3 clinical trial for VGX-3100, an increase of $2.2 million in expenses related to our DARPA Ebola grant and an increase of $759,000 in non-cash stock based compensation.

General and administrative expenses. General and administrative expenses, which include business development expenses, the amortization of intangible assets and patent expenses, were $6.2 million and $13.9 million, for the three and six months ended June 30, 2017, respectively, as compared to $5.8 million and $11.2 million for the three and six months ended June 30, 2016, respectively. The increase for the three-month period year over year was primarily due to increases in employee headcount, non-cash stock based compensation and rent expense of $354,000, $239,000 and $173,000, respectively. These were partially offset by decreases in legal and patent expenses and employee recruitment expenses of $139,000 and $125,000, respectively. The increase for the six-month period year over year was primarily due to increases in non-cash stock based compensation, employee headcount, rent expense and

amortization of intangible assets of $2.0 million, $915,000, $410,000 and $281,000, respectively. These were partially offset by a decrease in employee recruitment expenses of $309,000.

Stock-based compensation. Stock-based compensation expense is measured at the grant date, based on the fair value of the award, and is recognized as expense over the requisite vesting period. Total employee and director stock-based compensation expense for the three and six months ended June 30, 2017 was $2.4 million and $7.7 million, respectively. Of these amounts, $1.2 million and $3.5 million were included in research and development expenses, respectively, and $1.2

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million and $4.2 million were included in general and administrative expenses, respectively. Total employee and director stock-based compensation expense for the three and six months ended June 30, 2016 was $2.0 million and $4.9 million, respectively. From these amounts, $1.0 million and $2.7 million were included in research and development expenses, respectively, and $973,000 and $2.2 million were included in general and administrative expenses, respectively. The increase for the three and six-month periods year over year was primarily due to increased headcount which resulted in an increase in the number of employee stock options and restricted stock units granted.

Change in fair value of common stock warrants. The net change in fair value of common stock warrants for the three and six months ended June 30, 2017 was $(313,000) and $(196,000), respectively, as compared to $(114,000) and $(520,000) for the three and six months ended June 30, 2016. The variance is primarily due to the revaluation of the registered common stock warrants we issued in March 2013. We revalue these warrants at each balance sheet date to fair value. If unexercised, the remaining warrants will expire in September 2018.

Gain (loss) from investment in affiliated entity. The gain (loss) is a result of the change in the fair market value of the investment in GeneOne for the three and six months ended June 30, 2017.

Gain on sale of assets. The gain on sale of assets is related to the May 2014 sale of animal health assets to Plumbline Life Sciences, Inc. ("PLS"). The gain is related to the cash received related to the sale in May 2016 (See Note 13 to our financial statements included in this report).

Liquidity and Capital Resources

Historically, our primary uses of cash have been to finance research and development activities including clinical trial activities in the oncology, DNA vaccines and other immunotherapy areas of our business. Since inception, we have satisfied our cash requirements principally from proceeds from the sale of equity securities.

Working Capital and Liquidity

As of June 30, 2017, we had cash and short-term investments of $92.0 million and working capital of $79.5 million, as compared to $104.8 million and $80.8 million, respectively, as of December 31, 2016. The decrease in cash and short-term investments during the six months ended June 30, 2017 was primarily due to expenditures related to our research and development activities, clinical trials and various general and administrative expenses related to legal, consultants, accounting and audit, and corporate development, partially offset by proceeds from the sale of common stock under our Sales Agreement.

Cash Flows

Net cash used in operating activities was $31.9 million and $29.0 million for the six months ended June 30, 2017 and 2016, respectively. Net cash used in operating activities for the six months ended June 30, 2017 consisted of net loss of ($32.6) million plus net changes in net operating assets and liabilities of ($12.9) million, partially offset by net adjustments of $13.5 million. The primary non-cash expenses added back to net loss included stock-based compensation of $7.9 million, depreciation and amortization of $1.8 million and loss on investment in affiliated entity of $1.4 million.

Net cash used in operating activities for the six months ended June 30, 2016 consisted of net loss of ($26.7) million plus net changes in net operating assets and liabilities of ($1.7) million and net adjustments of ($513,000). The primary non-cash income (expense) added back to net loss included gain on investment in affiliated entity of $6.8 million and gain on sale of intangible assets of $1.0 million, offset by stock-based compensation of $5.3 million and depreciation and amortization of $1.4 million.

Net cash provided by (used in) investing activities was $11.7 million and $(2.7) million for the six months ended June 30, 2017 and 2016, respectively. The variance was primarily the result of timing differences in short-term investment purchases, sales and maturities.

Net cash provided by financing activities was $24.9 million and $2.5 million for the six months ended June 30, 2017 and 2016, respectively. The increase in cash provided from financing activities was primarily due to proceeds from the sale of common stock under our Sales Agreement in the 2017 period.

In June 2016, we entered into an ATM sales agreement with an outside placement agent (the "Placement Agent") to sell shares of our common stock with aggregate gross proceeds of up to $50.0 million from time to time, through an ATM equity offering program under which the Placement Agent will act as sales agent. During the six months ended June 30, 2017, we sold 2,917,725 shares of common stock under the ATM Sales Agreement for net proceeds of $24.1 million.

On July 25, 2017, we closed an underwritten public offering of 12,500,000 shares of our common stock at a public offering price of $6.00 per share. The net proceeds, after deducting the underwriters' discounts and commissions and other estimated offering expenses payable by us, were $70.2 million. In addition, we have granted the underwriters a 30 day option to purchase up to 1,875,000 additional shares of our common stock on the same terms and conditions. During the six months ended June 30, 2017, stock options to purchase 329,259 shares of common stock were exercised for net proceeds to us of $866,000. During the six months ended June 30, 2016, stock options to purchase 590,902 shares of common stock were exercised for net proceeds to us of $1.4 million.

As of June 30, 2017, we had an accumulated deficit of $467.7 million. We have operated at a loss since 1994, and we expect to continue to operate at a loss for some time. The amount of the accumulated deficit will continue to increase, as it will be expensive to continue research and development efforts. If these activities are successful and if we receive approval from the FDA to market our DNA vaccine products, then we will need to raise additional funding to market and sell the approved vaccine products and equipment. We cannot predict the outcome of the above matters at this time. We are evaluating potential collaborations as an additional way to fund operations. We believe that our current cash and short-term investments are sufficient to meet planned working capital requirements for at least the next twelve months from the date of this report.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

ITEM 3. QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Market risk represents the risk of loss that may impact our consolidated financial position, results of operations or cash flows due to adverse changes in financial and commodity market prices and rates. We are exposed to market risk primarily in the area of changes in United States interest rates and conditions in the credit markets, and the recent fluctuations in interest rates and availability of funding in the credit markets primarily impact the performance of our investments. We do not have any material foreign currency or other derivative financial instruments. Under our current policies, we do not use interest rate derivative instruments to manage exposure to interest rate changes. We attempt to increase the safety and preservation of our invested principal funds by limiting default risk, market risk and reinvestment risk. We mitigate default risk by investing in investment grade securities. Due to the short-term maturities of our cash equivalents and the low risk profile of our investments at June 30, 2017, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents.

Fair Value Measurements

We account for our common stock warrants pursuant to the authoritative guidance on accounting for derivative financial instruments indexed to, and potentially settled in, a company's own stock, on the understanding that in compliance with applicable securities laws, the registered warrants require the issuance of registered securities upon exercise and do not sufficiently preclude an implied right to net cash settlement. We classify registered warrants on the condensed consolidated balance sheet as a current liability that is revalued at each balance sheet date subsequent to the initial issuance.

The investment in affiliated entity represents our ownership interest in the Korean based companies, GeneOne and PLS. We report these investments at fair value on the condensed consolidated balance sheet using the closing price of GeneOne and PLS shares of common stock as reported on the date of determination on the Korean Stock Exchange and Korea New Exchange Market, respectively.

Foreign Currency Risk

We have operated primarily in the United States and most transactions during the six months ended June 30, 2017, have been made in United States dollars. Accordingly, we have not had any material exposure to foreign currency rate fluctuations, with the exception of the valuation of our equity investments in GeneOne and PLS which are denominated in South Korean Won. We do not have any foreign currency hedging instruments in place.

Certain transactions related to us are denominated primarily in foreign currencies, including Euros, British Pounds, Canadian Dollars and South Korean Won. As a result, our financial results could be affected by factors such as

changes in foreign currency exchange rates or weak economic conditions in foreign markets where we conduct business, including the impact of the existing crisis in the global financial markets in such countries and the impact on both the United States dollar and the noted foreign currencies.

We do not use derivative financial instruments for speculative purposes. We do not engage in exchange rate hedging or hold or issue foreign exchange contracts for trading purposes. Currently, we do not expect the impact of fluctuations in the relative fair value of other currencies to be material in 2017.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures, which are designed to ensure that information required to be disclosed in the reports we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, as appropriate to allow timely decisions regarding required disclosures.

In designing and evaluating our disclosure controls and procedures, management recognizes that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Based on an evaluation carried out as of the end of the period covered by this quarterly report, under the supervision and with the participation of our management, including our CEO and CFO, our CEO and CFO have concluded that, as of the end of such period, our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) were effective as of June 30, 2017 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There have not been any changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2017 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other Information

ITEM 1. LEGAL PROCEEDINGS

We are not currently a party to any material litigation or other material legal proceedings.

ITEM 1A. RISK FACTORS

Our business is subject to numerous risks. You should carefully consider and evaluate each of the following factors as well as the other information in this Quarterly Report on Form 10-Q, including our financial statements and the related notes, the risk factors discussed in our 2016 Annual Report, and the risk factors discussed in the Prospectus Supplement we filed with the SEC on July 20, 2017, in evaluating our business and prospects. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also impair our business operations. If any of the following risks actually occur, our business and financial results could be harmed. In that case, the trading price of our common stock could decline. You should also consider the more detailed description of our business contained in our 2016 Annual Report.

Risks Related to Our Business and Industry

We have incurred losses since inception, expect to incur significant net losses in the foreseeable future and may never become profitable.

We have experienced significant operating losses to date; as of June 30, 2017 our accumulated deficit was approximately $467.7 million. We have generated limited revenues, primarily consisting of license and grant revenue, and interest income. We expect to continue to incur substantial additional operating losses for at least the next several years as we advance our clinical trials and research and development activities. We may never successfully commercialize our vaccine product candidates or electroporation-based synthetic vaccine delivery technology and thus may never have any significant future revenues or achieve and sustain profitability.

We have limited sources of revenue and our success is dependent on our ability to develop our vaccine and immunotherapies and other product candidates and electroporation equipment.

We do not sell any products and may not have any other products commercially available for several years, if at all. Our ability to generate future revenues depends heavily on our success in:

- developing and securing United States and/or foreign regulatory approvals for our product candidates, including securing regulatory approval for conducting clinical trials with product candidates;
- developing our electroporation-based DNA delivery technology; and
- commercializing any products for which we receive approval from the FDA and foreign regulatory authorities.

Our electroporation equipment and product candidates will require extensive additional clinical study and evaluation, regulatory approval in multiple jurisdictions, substantial investment and significant marketing efforts before we generate any revenues from product sales. We are not permitted to market or promote our electroporation equipment and product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities. If we do not receive regulatory approval for and successfully commercialize any products, we will not generate any revenues from sales of electroporation equipment and products, and we may not be able to continue our operations.

None of our human vaccine and immunotherapy product candidates have been approved for sale, and we may not develop commercially successful vaccine products.

Our human vaccine programs are in the early stages of research and development, and currently include vaccine product candidates in discovery, pre-clinical studies and Phase 1 and 2 clinical studies. There is limited data regarding the efficiency of synthetic vaccines compared with conventional vaccines, and we must conduct a substantial amount of additional research and development before any regulatory authority will approve any of our vaccine product candidates. The success of our efforts to develop and commercialize our vaccine product candidates could fail for a number of reasons. For example, we could experience delays in product development and clinical trials. Our vaccine product candidates could be found to be ineffective or unsafe, or otherwise fail to receive necessary regulatory clearances. The products, if safe and effective, could be difficult to manufacture on a large scale or uneconomical to market, or our competitors could develop superior vaccine products more quickly and efficiently or more effectively

market their competing products.

In addition, adverse events, or the perception of adverse events, relating to vaccines and vaccine delivery technologies may negatively impact our ability to develop commercially successful vaccine products. For example, pharmaceutical

companies have been subject to claims that the use of some pediatric vaccines has caused personal injuries, including brain damage, central nervous system damage and autism. These and other claims may influence public perception of the use of vaccine products and could result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approval of our potential products.

We will need substantial additional capital to develop our synthetic vaccine and electroporation delivery technology and other product candidates and for our future operations.

Conducting the costly and time consuming research, pre-clinical and clinical testing necessary to obtain regulatory approvals and bring our vaccine delivery technology and product candidates to market will require a commitment of substantial funds in excess of our current capital. Our future capital requirements will depend on many factors, including, among others:

- the progress of our current and new product development programs;
- the progress, scope and results of our pre-clinical and clinical testing;
- the time and cost involved in obtaining regulatory approvals;
- the cost of manufacturing our products and product candidates;
- the cost of prosecuting, enforcing and defending against patent infringement claims and other intellectual property rights;
- competing technological and market developments; and
- our ability and costs to establish and maintain collaborative and other arrangements with third parties to assist in potentially bringing our products to market.

Additional financing may not be available on acceptable terms, or at all. Domestic and international capital markets have been experiencing heightened volatility and turmoil, making it more difficult to raise capital through the issuance of equity securities. Furthermore, as a result of the recent volatility in the capital markets, the cost and availability of credit has been and may continue to be adversely affected by illiquid credit markets and wider credit spreads. Concern about the stability of the markets generally and the strength of counterparties specifically has led many lenders and institutional investors to reduce, and in some cases cease to provide, funding to borrowers. To the extent we are able to raise additional capital through the sale of equity securities or we issue securities in connection with another transaction, the ownership position of existing stockholders could be substantially diluted. If additional funds are raised through the issuance of preferred stock or debt securities, these securities are likely to have rights, preferences and privileges senior to our common stock and may involve significant fees, interest expense, restrictive covenants and the granting of security interests in our assets. Fluctuating interest rates could also increase the costs of any debt financing we may obtain. Raising capital through a licensing or other transaction involving our intellectual property could require us to relinquish valuable intellectual property rights and thereby sacrifice long-term value for short-term liquidity.

Our failure to successfully address ongoing liquidity requirements would have a substantially negative impact on our business. If we are unable to obtain additional capital on acceptable terms when needed, we may need to take actions that adversely affect our business, our stock price and our ability to achieve cash flow in the future, including possibly surrendering our rights to some technologies or product opportunities, delaying our clinical trials or curtailing or ceasing operations.

We depend upon key personnel who may terminate their employment with us at any time and we may need to hire additional qualified personnel in order to obtain financing, pursue collaborations or develop or market our product candidates.

The success of our business strategy will depend to a significant degree upon the continued services of key management, technical and scientific personnel and our ability to attract and retain additional qualified personnel and managers, including personnel with expertise in clinical trials, government regulation, manufacturing, marketing and other areas. Competition for qualified personnel is intense among companies, academic institutions and other organizations. If we are unable to attract and retain key personnel and advisors, it may negatively affect our ability to successfully develop, test, commercialize and market our products and product candidates.

We face intense and increasing competition and many of our competitors have significantly greater resources and experience.

If any of our competitors develop products with efficacy or safety profiles significantly better than our products, we may not be able to commercialize our products, and sales of any of our commercialized products could be harmed. Some of our competitors and potential competitors have substantially greater product development capabilities and financial, scientific, marketing and human resources than we do. Competitors may develop products earlier, obtain FDA approvals for products more rapidly, or develop products that are more effective than those under development by us. We will seek to expand our

technological capabilities to remain competitive; however, research and development by others may render our technologies or products obsolete or noncompetitive, or result in treatments or cures superior to ours.

Many other companies are pursuing other forms of treatment or prevention for diseases that we target. For example, many of our competitors are working on developing and testing H5N1, H1N1 and universal influenza vaccines, and several H1N1 vaccines developed by our competitors have been approved for human use. Our competitors and potential competitors include large pharmaceutical and medical device companies and more established biotechnology companies. These companies have significantly greater financial and other resources and greater expertise than us in research and development, securing government contracts and grants to support research and development efforts, manufacturing, pre-clinical and clinical testing, obtaining regulatory approvals and marketing. This may make it easier for them to respond more quickly than us to new or changing opportunities, technologies or market needs. Many of these competitors operate large, well-funded research and development programs and have significant products approved or in development. Small companies may also prove to be significant competitors, particularly through collaborative arrangements with large pharmaceutical companies or through acquisition or development of intellectual property rights. Our potential competitors also include academic institutions, governmental agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for product and clinical development and marketing. Research and development by others may seek to render our technologies or products obsolete or noncompetitive.

If we lose or are unable to secure collaborators or partners, or if our collaborators or partners do not apply adequate resources to their relationships with us, our product development and potential for profitability will suffer.

We have entered into, or may enter into, distribution, co-promotion, partnership, sponsored research and other arrangements for development, manufacturing, sales, marketing and other commercialization activities relating to our products. For example, in the past we have entered into license and collaboration agreements. The amount and timing of resources applied by our collaborators are largely outside of our control.

If any of our current or future collaborators breaches or terminates our agreements, or fails to conduct our collaborative activities in a timely manner, our commercialization of products could be diminished or blocked completely. We may not receive any event-based payments, milestone payments or royalty payments under our collaborative agreements if our collaborative partners fail to develop products in a timely manner or at all. It is possible that collaborators will change their strategic focus, pursue alternative technologies or develop alternative products, either on their own or in collaboration with others. Further, we may be forced to fund programs that were previously funded by our collaborators, and we may not have, or be able to access, the necessary funding. The effectiveness of our partners, if any, in marketing our products will also affect our revenues and earnings.

We desire to enter into new collaborative agreements. However, we may not be able to successfully negotiate any additional collaborative arrangements and, if established, these relationships may not be scientifically or commercially successful. Our success in the future depends in part on our ability to enter into agreements with other highly-regarded organizations. This can be difficult due to internal and external constraints placed on these organizations. Some organizations may have insufficient administrative and related infrastructure to enable collaborations with many companies at once, which can extend the time it takes to develop, negotiate and implement a collaboration. Once news of discussions regarding possible collaborations are known in the medical community, regardless of whether the news is accurate, failure to announce a collaborative agreement or the entity's announcement of a collaboration with another entity may result in adverse speculation about us, resulting in harm to our reputation and our business.

Disputes could also arise between us and our existing or future collaborators, as to a variety of matters, including financial and intellectual property matters or other obligations under our agreements. These disputes could be both expensive and time-consuming and may result in delays in the development and commercialization of our products or could damage our relationship with a collaborator.

A small number of licensing partners and government contracts account for a substantial portion of our revenue.

We currently derive, and in the past we have derived, a significant portion of our revenue from a limited number of licensing partners and government grants and contracts. Revenue can fluctuate significantly depending on the timing of up-front and event-based payments and work performed. If we fail to sign additional future contracts with major licensing partners and the government, if a contract is delayed or deferred, or if an existing contract expires or is canceled and we fail to replace the contract with new business, our revenue would be adversely affected.

We have agreements with government agencies, which are subject to termination and uncertain future funding. We have entered into agreements with government agencies, such as the NIAID and DARPA, and we intend to continue entering into these agreements in the future. Our business is partially dependent on the continued performance by these

government agencies of their responsibilities under these agreements, including adequate continued funding of the agencies and their programs. We have no control over the resources and funding that government agencies may devote to these agreements, which may be subject to annual renewal and which generally may be terminated by the government agencies at any time.

Government agencies may fail to perform their responsibilities under these agreements, which may cause them to be terminated by the government agencies. In addition, we may fail to perform our responsibilities under these agreements. Many of our government agreements are subject to audits, which may occur several years after the period to which the audit relates. If an audit identifies significant unallowable costs, we could incur a material charge to our earnings or reduction in our cash position. As a result, we may be unsuccessful entering, or ineligible to enter, into future government agreements.

Our quarterly operating results may fluctuate significantly.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expenses related to our electroporation equipment, product candidates or future development programs;
- expenses related to corporate transactions, including ones not fully completed;
- addition or termination of clinical trials or funding support;
- any intellectual property infringement lawsuit in which we may become involved;
- any legal claims that may be asserted against us or any of our officers;
- regulatory developments affecting our electroporation equipment and product candidates or those of our competitors;
- our execution of any collaborative, licensing or similar arrangements, and the timing of payments we may make or receive under these arrangements; and
- if any of our products receives regulatory approval, the levels of underlying demand for our products.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

If we are unable to obtain FDA approval of our products, we will not be able to commercialize them in the United States.

We need FDA approval prior to marketing our electroporation equipment and products in the United States. If we fail to obtain FDA approval to market our electroporation equipment and product candidates, we will be unable to sell our products in the United States, which will significantly impair our ability to generate any revenues.

This regulatory review and approval process, which includes evaluation of pre-clinical studies and clinical trials of our products as well as the evaluation of our manufacturing processes and our third-party contract manufacturers' facilities, is lengthy, expensive and uncertain. To receive approval, we must, among other things, demonstrate with substantial evidence from well-controlled clinical trials that our electroporation equipment and product candidates are both safe and effective for each indication for which approval is sought. Satisfaction of the approval requirements typically takes several years and the time needed to satisfy them may vary substantially, based on the type, complexity and novelty of the product. We do not know if or when we might receive regulatory approvals for our electroporation equipment and any of our product candidates currently under development. Moreover, any approvals that we obtain may not cover all of the clinical indications for which we are seeking approval, or could contain significant limitations in the form of narrow indications, warnings, precautions or contra-indications with respect to conditions of use. In such event, our ability to generate revenues from such products would be greatly reduced and our business would be harmed.

The FDA has substantial discretion in the approval process and may either refuse to consider our application for substantive review or may form the opinion after review of our data that our application is insufficient to allow approval of our electroporation equipment and product candidates. If the FDA does not consider or approve our application, it may require that we conduct additional clinical, pre-clinical or manufacturing validation studies and submit that data before it will reconsider our application. Depending on the extent of these or any other studies, approval of any applications that we submit may be delayed by several years, or may require us to expend more

resources than we have available. It is also possible that additional studies, if performed and completed, may not be successful or considered sufficient by the FDA for approval or even to make our applications approvable. If any of these outcomes occur, we may be forced to abandon one or more of our applications for approval, which might significantly harm our business and prospects.

It is possible that none of our products or any product we may seek to develop in the future will ever obtain the appropriate regulatory approvals necessary for us or our collaborators to commence product sales. Any delay in obtaining, or an inability to obtain, applicable regulatory approvals would prevent us from commercializing our products, generating revenues and achieving and sustaining profitability.

Clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is uncertain. Failure can occur at any time during the clinical trial process. The results of pre-clinical studies and early clinical trials of our products may not be predictive of the results of later-stage clinical trials. Results from one study may not be reflected or supported by the results of similar studies. Results of an animal study may not be indicative of results achievable in human studies. Human-use equipment and product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through pre-clinical studies and initial clinical testing. The time required to obtain approval by the FDA and similar foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials, depending upon numerous factors. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change. We have not obtained regulatory approval for any human-use products.

Our products could fail to complete the clinical trial process for many reasons, including the following:

- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our electroporation equipment and a product candidate are safe and effective for any indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may not be successful in enrolling a sufficient number of participants in clinical trials;
- we may be unable to demonstrate that our electroporation equipment and a product candidate's clinical and other benefits outweigh its safety risks;
- we may be unable to demonstrate that our electroporation equipment and a product candidate presents an advantage over existing therapies, or over placebo in any indications for which the FDA requires a placebo-controlled trial;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from pre-clinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a new drug application or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of us or third-party manufacturers with which we or our collaborators contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Delays in the commencement or completion of clinical testing could result in increased costs to us and delay or limit our ability to generate revenues.

Delays in the commencement or completion of clinical testing could significantly affect our product development costs. We do not know whether planned clinical trials will begin on time or be completed on schedule, if at all. In addition, ongoing clinical trials may not be completed on schedule, or at all. The commencement and completion of clinical trials can be delayed for a number of reasons, including delays related to:

- obtaining regulatory approval to commence a clinical trial;
- adverse results from third party clinical trials involving gene based therapies and the regulatory response thereto;
- reaching agreement on acceptable terms with prospective CROs and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- future bans or stricter standards imposed on gene based therapy clinical trials;
- manufacturing sufficient quantities of our electroporation equipment and product candidates for use in clinical trials;

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- obtaining institutional review board, or IRB, approval to conduct a clinical trial at a prospective site;
- slower than expected recruitment and enrollment of patients to participate in clinical trials for a variety of reasons, including competition from other clinical trial programs for similar indications;
- conducting clinical trials with sites internationally due to regulatory approvals and meeting international standards;
- retaining patients who have initiated a clinical trial but may be prone to withdraw due to side effects from the therapy, lack of efficacy or personal issues, or who are lost to further follow-up;
- collecting, reviewing and analyzing our clinical trial data; and
- global unrest, terrorist activities, and economic and other external factors.

Clinical trials may also be delayed as a result of ambiguous or negative interim results. In addition, a clinical trial may be suspended or terminated by us, the FDA, the IRB overseeing the clinical trial at issue, any of our clinical trial sites with respect to that site, or other regulatory authorities due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- inspection of the clinical trial operations or trial sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;
- unforeseen safety issues; and
- lack of adequate funding to continue the clinical trial.

If we experience delays in completion of, or if we terminate, any of our clinical trials, the commercial prospects for our electroporation equipment and our product candidates may be harmed and our ability to generate product revenues will be delayed. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of a product candidate. Further, delays in the commencement or completion of clinical trials may adversely affect the trading price of our common stock.

We and our collaborators rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we and our collaborators may not be able to obtain regulatory approval for or commercialize our product candidates.

We and our collaborators have entered into agreements with CROs to provide monitors for and to manage data for our on-going clinical programs. We and the CROs conducting clinical trials for our electroporation equipment and product candidates are required to comply with current good clinical practices, or GCPs, regulations and guidelines enforced by the FDA for all of our products in clinical development. The FDA enforces GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or the CROs conducting clinical trials of our product candidates fail to comply with applicable GCPs, the clinical data generated in the clinical trials may be deemed unreliable and the FDA may require additional clinical trials before approving any marketing applications.

If any relationships with CROs terminate, we or our collaborators may not be able to enter into arrangements with alternative CROs. In addition, these third-party CROs are not our employees, and we cannot control whether or not they devote sufficient time and resources to our on-going clinical programs or perform trials efficiently. These CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could harm our competitive position. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements, or for other reasons, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed. Cost overruns by or disputes with our CROs may significantly increase our expenses.

Even if our products receive regulatory approval, they may still face future development and regulatory difficulties.

Even if United States regulatory approval is obtained, the FDA may still impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies. This governmental oversight may be particularly strict with respect to gene based therapies. Our products will also be subject to ongoing FDA requirements governing the labeling, packaging, storage, advertising, promotion, record keeping and submission of safety and other post-market information. In addition, manufacturers of drug products and

their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with current good manufacturing practices, or cGMP, regulations. If we or a regulatory agency discover previously unknown problems with a product, such as

adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue Warning Letters or untitled letters;
- impose civil or criminal penalties;
- suspend regulatory approval;
- suspend any ongoing clinical trials;
- refuse to approve pending applications or supplements to applications filed by us;
- impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products or require us to initiate a product recall.

Even if our products receive regulatory approval in the United States, we may never receive approval or commercialize our products outside of the United States.

In order to market any electroporation equipment and product candidates outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in the United States as well as other risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. Failure to obtain regulatory approval in other countries or any delay or setback in obtaining such approval could have the same adverse effects detailed above regarding FDA approval in the United States. Such effects include the risks that our product candidates may not be approved for all indications requested, which could limit the uses of our product candidates and have an adverse effect on their commercial potential or require costly, post-marketing follow-up studies.

We face potential product liability exposure and, if successful claims are brought against us, we may incur substantial liability.

The use of our electroporation equipment and synthetic vaccine candidates in clinical trials and the sale of any products for which we obtain marketing approval expose us to the risk of product liability claims. Product liability claims might be brought against us by consumers, health care providers, pharmaceutical companies or others selling or otherwise coming into contact with our products. For example, pharmaceutical companies have been subject to claims that the use of some pediatric vaccines has caused personal injuries, including brain damage, central nervous system damage and autism, and these companies have incurred material costs to defend these claims. If we cannot successfully defend ourselves against product liability claims, we could incur substantial liabilities. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- decreased demand for our product candidates;
- impairment of our business reputation;
- withdrawal of clinical trial participants;
- costs of related litigation;
- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants;
- loss of revenues; and
- inability to commercialize our products.

We have obtained product liability insurance coverage for our clinical trials, but our insurance coverage may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. On occasion, large judgments have been awarded in class action lawsuits based on products that had unanticipated side effects. A successful product liability claim or

series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could adversely affect our business.

We currently have no marketing and sales organization. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our products, we may not be able to generate product revenues.

We currently do not have a sales organization for the marketing, sales and distribution of our electroporation equipment and product candidates. In order to commercialize any products, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. We contemplate establishing our own sales force or seeking third-party partners to sell our products. The establishment and development of our own sales force to market any products we may develop will be expensive and time consuming and could delay any product launch, and we may not be able to successfully develop this capability. We will also have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel. To the extent we rely on third parties to commercialize our approved products, if any, we will receive lower revenues than if we commercialized these products ourselves. In addition, we may have little or no control over the sales efforts of third parties involved in our commercialization efforts. In the event we are unable to develop our own marketing and sales force or collaborate with a third-party marketing and sales organization, we would not be able to commercialize our product candidates which would negatively impact our ability to generate product revenues.

If any of our products for which we receive regulatory approval does not achieve broad market acceptance, the revenues that we generate from their sales will be limited.

The commercial success of our electroporation equipment and product candidates for which we obtain marketing approval from the FDA or other regulatory authorities will depend upon the acceptance of these products by both the medical community and patient population. Coverage and reimbursement of our product candidates by third-party payors, including government payors, generally is also necessary for optimal commercial success. The degree of market acceptance of any of our approved products will depend on a number of factors, including:

- our ability to provide acceptable evidence of safety and efficacy;
- the relative convenience and ease of administration;
- the prevalence and severity of any actual or perceived adverse side effects;
- limitations or warnings contained in a product's FDA-approved labeling, including, for example, potential “black box” warnings
- availability of alternative treatments;
- pricing and cost effectiveness;
- the effectiveness of our or any future collaborators' sales and marketing strategies;
- our ability to obtain sufficient third-party coverage or reimbursement; and
- the willingness of patients to pay out of pocket in the absence of third-party coverage.

If our electroporation equipment and product candidates are approved but do not achieve an adequate level of acceptance by physicians, health care payors and patients, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, our efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

We are subject to uncertainty relating to reimbursement policies which, if not favorable to our product candidates, could hinder or prevent our products' commercial success.

Our ability to commercialize our electroporation equipment and product candidates successfully will depend in part on the extent to which governmental authorities, private health insurers and other third-party payors establish appropriate coverage and reimbursement levels for our product candidates and related treatments. As a threshold for coverage and reimbursement, third-party payors generally require that drug products have been approved for marketing by the FDA. Third-party payors also are increasingly challenging the effectiveness of and prices charged for medical products and services. We may not be able to obtain third-party coverage or reimbursement for our products in whole or in part.

Healthcare reform measures could hinder or prevent our products' commercial success.

In both the United States and certain foreign jurisdictions there have been, and we anticipate there will continue to be, a number of legislative and regulatory changes to the healthcare system that could impact our ability to sell any of our

products profitably. In the United States, the Federal government enacted healthcare reform legislation, the Patient Protection and Affordable Care Act, or the ACA. We believe there could be continuing trends towards expanding coverage to more individuals, containing health care costs and improving quality. At the same time, the rebates, discounts, taxes and other costs associated with the ACA are expected to be a significant cost to the pharmaceutical industry.

The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to make and implement healthcare reforms may adversely affect:

- our ability to set a price we believe is fair for our products;
- our ability to generate revenues and achieve or maintain profitability;
- the availability of capital; and
- our ability to obtain timely approval of our products.

If we fail to comply with applicable healthcare regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

Certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights may be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business, without limitation. The laws that may affect our ability to operate include:

- the federal healthcare program Anti-Kickback Statute, which prohibits, among other things, people from soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs;
- federal false claims laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;
- the ACA expands the government's investigative and enforcement authority and increases the penalties for fraud and abuse, including amendments to both the False Claims Act and the Anti-Kickback Statute to make it easier to bring suit under those statutes;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which prohibits executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters and which also imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;
- the Federal Food, Drug, and Cosmetic Act, which among other things, strictly regulates drug product marketing, prohibits manufacturers from marketing drug products for off-label use and regulates the distribution of drug samples;
- the U.S. Foreign Corrupt Practices Act, which, among other things, prohibits companies issuing stock in the U.S. from bribing foreign officials for government contracts and other business; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Additionally, the compliance environment is changing, with more states, such as California and Massachusetts, mandating implementation of compliance programs, compliance with industry ethics codes, and spending limits, and other states, such as Vermont, Maine, and Minnesota requiring reporting to state governments of gifts, compensation, and other remuneration to physicians. Under the ACA, pharmaceutical companies are required to record any transfers of value made to doctors and teaching hospitals and to disclose such data to HHS. These laws all provide for penalties for non-compliance. The shifting regulatory environment, along with the requirement to comply with multiple jurisdictions with different compliance and/or reporting requirements, increases the possibility that a company may run afoul of one or more laws.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

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If we and the contract manufacturers upon whom we rely fail to produce our systems and product candidates in the volumes that we require on a timely basis, or fail to comply with stringent regulations, we may face delays in the development and commercialization of our electroporation equipment and product candidates.

We manufacture some components of our electroporation systems and utilize the services of contract manufacturers to manufacture the remaining components of these systems and our product supplies for clinical trials. The manufacture of our systems and product supplies requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers often encounter difficulties in production, particularly in scaling up for commercial production. These problems include difficulties with production costs and yields, quality control, including stability of the equipment and product candidates and quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. If we or our manufacturers were to encounter any of these difficulties or our manufacturers otherwise fail to comply with their obligations to us, our ability to provide our electroporation equipment to our partners and products to patients in our clinical trials or to commercially launch a product would be jeopardized. Any delay or interruption in the supply of clinical trial supplies could delay the completion of our clinical trials, increase the costs associated with maintaining our clinical trial program and, depending upon the period of delay, require us to commence new trials at significant additional expense or terminate the trials completely.

In addition, all manufacturers of our products must comply with cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include, among other things, quality control, quality assurance and the generation and maintenance of records and documentation. Manufacturers of our products may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. We have little control over our manufacturers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval. If the safety of any product is compromised due to our or our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products, and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay of clinical trials, regulatory submissions, approvals or commercialization of our products, entail higher costs or result in our being unable to effectively commercialize our products. Furthermore, if our manufacturers fail to deliver the required commercial quantities on a timely basis, pursuant to provided specifications and at commercially reasonable prices, we may be unable to meet demand for our products and would lose potential revenues.

Our failure to successfully acquire, develop and market additional product candidates or approved products would impair our ability to grow.

We may acquire, in-license, develop and/or market additional products and product candidates. The success of these actions depends partly upon our ability to identify, select and acquire promising product candidates and products. The process of proposing, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing and sales resources, may compete with us for the license or acquisition of product candidates and approved products. We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses and technologies and integrate them into our current infrastructure. Moreover, we may devote resources to potential acquisitions or in-licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire the rights to additional product candidates on terms that we find acceptable, or at all.

In addition, future acquisitions may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's time and attention to develop acquired products or technologies;
- incurrence of substantial debt or dilutive issuances of securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- increased amortization expenses;
-

difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;

- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

Further, any product candidate that we acquire may require additional development efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to risks of failure typical of product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities.

Our business involves the use of hazardous materials and we and our third-party manufacturers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our and our third-party manufacturers' activities involve the controlled storage, use and disposal of hazardous materials, including the components of our product candidates and other hazardous compounds. We and our manufacturers are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. In the event of an accident, state or federal authorities may curtail the use of these materials and interrupt our business operations. If we are subject to any liability as a result of our or our third-party manufacturers' activities involving hazardous materials, our business and financial condition may be adversely affected.

We may be subject to stockholder litigation, which would harm our business and financial condition.

We may have actions brought against us by stockholders relating to past transactions, changes in our stock price or other matters. Any such actions could give rise to substantial damages, and thereby have a material adverse effect on our consolidated financial position, liquidity, or results of operations. Even if an action is not resolved against us, the uncertainty and expense associated with stockholder actions could harm our business, financial condition and reputation. Litigation can be costly, time-consuming and disruptive to business operations. The defense of lawsuits could also result in diversion of our management's time and attention away from business operations, which could harm our business.

Our results of operations and liquidity needs could be materially affected by market fluctuations and general economic conditions.

Our results of operations could be materially affected by economic conditions generally, both in the United States and elsewhere around the world. Concerns over inflation, energy costs, geopolitical issues and the availability and cost of credit have contributed to increased volatility and diminished expectations for the economy and the markets going forward. These factors, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have precipitated an economic recession. Domestic and international capital markets have also been experiencing heightened volatility and turmoil. These events and the continuing market upheavals may have an adverse effect on us. In the event of a continuing market downturn, our results of operations could be adversely affected. Our future cost of equity or debt capital and access to the capital markets could be adversely affected, and our stock price could decline. There may be disruption in or delay in the performance of our third-party contractors and suppliers. If our contractors, suppliers and partners are unable to satisfy their contractual commitments, our business could suffer. In addition, we maintain significant amounts of cash and cash equivalents at one or more financial institutions that are in excess of federally insured limits. Given the current instability of financial institutions, we may experience losses on these deposits.

We are dependent on information technology and our systems and infrastructure face certain risks, including from cybersecurity breaches and data leakage.

We rely to a large extent upon sophisticated information technology systems to operate our businesses, some of which are managed, hosted provided and/or used for third-parties or their vendors. We collect, store and transmit large amounts of confidential information, and we deploy and operate an array of technical and procedural controls to maintain the confidentiality and integrity of such confidential information. A significant breakdown, invasion, corruption, destruction or interruption of critical information technology systems or infrastructure, by our workforce, others with authorized access to our systems or unauthorized persons could negatively impact operations. The ever-increasing use and evolution of technology, including cloud-based computing, creates opportunities for the unintentional dissemination or intentional destruction of confidential information stored in our or our third-party providers' systems, portable media or storage devices. We could also experience a business interruption, theft of confidential information or reputational damage from industrial espionage attacks, malware or other cyber-attacks, which may compromise our system infrastructure or lead to data leakage, either internally or at our third-party

providers. While we have invested in the protection of data and information technology, there can be no assurance that our efforts will prevent service interruptions or security breaches. Any such interruption or breach of our systems could adversely affect our business operations and/or result in the loss of critical or sensitive confidential information or intellectual property, and could result in financial, legal, business and reputational harm to us.

Risks Related to Our Intellectual Property

It is difficult and costly to generate and protect our intellectual property and our proprietary technologies, and we may not be able to ensure their protection.

Our commercial success will depend in part on obtaining and maintaining patent, trademark, trade secret, and other intellectual property protection relating to our electroporation equipment and product candidates, as well as successfully defending these intellectual property rights against third-party challenges.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. The laws and regulations regarding the breadth of claims allowed in biotechnology patents has evolved over recent years and continues to undergo review and revision, both in the United States. The biotechnology patent situation outside the United States can be even more uncertain depending on the country. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our licensed patents, our patents or in third-party patents, nor can we predict the likelihood of our patents surviving a patent validity challenge.

The degree of future protection for our intellectual property rights is uncertain, because legal decision-making can be unpredictable, thereby often times resulting in limited protection, which may not adequately protect our rights or permit us to gain or keep our competitive advantage, or resulting in an invalid or unenforceable patent. For example:

- we, or the parties from whom we have acquired or licensed patent rights, may not have been the first to file the underlying patent applications or the first to make the inventions covered by such patents;
- the named inventors or co-inventors of patents or patent applications that we have licensed or acquired may be incorrect, which may give rise to inventorship and ownership challenges;
- others may develop similar or alternative technologies, or duplicate any of our products or technologies that may not be covered by our patents, including design-arounds;
- pending patent applications may not result in issued patents;
- the issued patents covering our products and technologies may not provide us with any competitive advantages or have any commercial value;
- the issued patents may be challenged and invalidated, or rendered unenforceable;
- the issued patents may be subject to reexamination, which could result in a narrowing of the scope of claims or cancellation of claims found unpatentable;
- we may not develop or acquire additional proprietary technologies that are patentable;
- our trademarks may be invalid or subject to a third party's prior use; or
- our ability to enforce our patent rights will depend on our ability to detect infringement, and litigation to enforce patent rights may not be pursued due to significant financial costs, diversion of resources, and unpredictability of a favorable result or ruling.

We depend, in part, on our licensors and collaborators to protect a portion of our intellectual property rights. In such cases, our licensors and collaborators may be primarily or wholly responsible for the maintenance of patents and prosecution of patent applications relating to important areas of our business. If any of these parties fail to adequately protect these products with issued patents, our business and prospects would be harmed significantly.

We also may rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our trade secrets to competitors. Enforcing a claim that a third-party entity illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If we or our licensors fail to obtain or maintain patent protection or trade secret protection for our product candidates or our technologies, third parties could use our proprietary information, which could impair our ability to compete in the market and adversely affect our ability to generate revenues and attain profitability.

From time to time, U.S. and other policymakers have proposed reforming the patent laws and regulations of their countries. In September 2011 the America Invents Act (the Act) was signed into law. The Act changed the current “first-to-invent” system to a system that awards a patent to the “first-inventor-to-file” for an application for a patentable

invention. The

Act also created a procedure to challenge newly issued patents in the patent office via post-grant proceedings and new inter parties reexamination proceedings. These changes may make it easier for competitors to challenge our patents, which could result in increased competition and have a material adverse effect on our product sales, business and results of operations. The changes may also make it harder to challenge third-party patents and place greater importance on being the first inventor to file a patent application on an invention.

If we are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation would have a material adverse effect on our business.

Other companies may have or may acquire intellectual property rights that could be enforced against us. If they do so, we may be required to alter our technologies, pay licensing fees or cease activities. If our products or technologies infringe the intellectual property rights of others, they could bring legal action against us or our licensors or collaborators claiming damages and seeking to enjoin any activities that they believe infringe their intellectual property rights.

Because patent applications can take many years to issue, and there is a period when the application remains undisclosed to the public, there may be currently pending applications unknown to us or reissue applications that may later result in issued patents upon which our products or technologies may infringe. There could also be existing patents of which we are unaware that our products or technologies may infringe. In addition, if third parties file patent applications or obtain patents claiming products or technologies also claimed by us in pending applications or issued patents, we may have to participate in interference or derivation proceedings in the United States Patent and Trademark Office to determine priority or derivation of the invention. If third parties file oppositions in foreign countries, we may also have to participate in opposition proceedings in foreign tribunals to defend the patentability of our filed foreign patent applications.

If a third party claims that we infringe its intellectual property rights, it could cause our business to suffer in a number of ways, including:

- we may become involved in time-consuming and expensive litigation, even if the claim is without merit, the third party's patent is invalid or we have not infringed;
- we may become liable for substantial damages for past infringement if a court decides that our technologies infringe upon a third party's patent;
- we may be enjoined by a court to stop making, selling or licensing our products or technologies without a license from a patent holder, which may not be available on commercially acceptable terms, if at all, or which may require us to pay substantial royalties or grant cross-licenses to our patents; and
- we may have to redesign our products so that they do not infringe upon others' patent rights, which may not be possible or could require substantial investment or time.

If any of these events occur, our business could suffer and the market price of our common stock may decline.

Risks Related to Our Common Stock

The price of our common stock is expected to be volatile and an investment in our common stock could decline substantially in value.

In light of our small size and limited resources, as well as the uncertainties and risks that can affect our business and industry, our stock price is expected to be highly volatile and can be subject to substantial drops, with or even in the absence of news affecting our business. Period to period comparisons are not indicative of future performance. The following factors, in addition to the other risk factors described in this annual report, and the potentially low volume of trades in our common stock, may have a significant impact on the market price of our common stock, some of which are beyond our control:

- developments concerning any research and development, clinical trials, manufacturing, and marketing efforts or collaborations;
- fluctuating public or scientific interest in the potential for influenza pandemic or other applications for our vaccine or other product candidates;
- our announcement of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- fluctuations in our operating results
- announcements of technological innovations;
- new products or services that we or our competitors offer;

- the initiation, conduct and/or outcome of intellectual property and/or litigation matters;

- changes in financial or other estimates by securities analysts or other reviewers or evaluators of our business;
- conditions or trends in bio-pharmaceutical or other healthcare industries;
- regulatory developments in the United States and other countries;
- negative perception of gene based therapy;
- changes in the economic performance and/or market valuations of other biotechnology and medical device companies;
- additions or departures of key personnel;
- sales or other transactions involving our common stock;
- changes in our capital structure;
- sales or other transactions by executive officers or directors involving our common stock;
- changes in accounting principles;
- global unrest, terrorist activities, and economic and other external factors; and
- catastrophic weather and/or global disease pandemics.

The stock market in general has recently experienced relatively large price and volume fluctuations. In particular, the market prices of securities of smaller biotechnology and medical device companies have experienced dramatic fluctuations that often have been unrelated or disproportionate to the operating results of these companies. Continued market fluctuations could result in extreme volatility in the price of the common stock, which could cause a decline in the value of the common stock. In addition, price volatility may increase if the trading volume of our common stock remains limited or declines.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock.

Our amended and restated certificate of incorporation contains provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- the authority of our board of directors to issue shares of undesignated preferred stock and to determine the rights, preferences and privileges of these shares, without stockholder approval;
- all stockholder actions must be effected at a duly called meeting of stockholders and not by written consent; and
- the elimination of cumulative voting.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These and other provisions in our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors, including to delay or impede a merger, tender offer or proxy contest involving our company. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

We have never paid cash dividends on our common stock and we do not anticipate paying dividends in the foreseeable future.

We have paid no cash dividends on our common stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any future debt or credit facility may preclude or limit our ability to pay any dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of potential gain for the foreseeable future.

The market price for our shares may not maintain their pre-reverse stock split market price.

On June 5, 2014, we effectuated a 4-for-1 reverse split of the Company's outstanding common stock. We cannot be certain that the reverse split will have a long-term positive effect on the market price of our common stock, or increase our ability to consummate financing arrangements in the future. The market price of our common stock is based on factors that may be unrelated to the number of shares outstanding. These factors include our performance, general economic and market conditions and other factors, many of which are beyond our control. The market price for our post-reverse stock split shares may not rise or remain constant in proportion to the reduction in the number of pre-split shares outstanding before the reverse

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split. Accordingly, the total market capitalization of our common stock after the reverse split may be lower than the total market capitalization before the reverse split.

Risks Related to our Equity Agreement and Collaboration and License Agreement with ApolloBio

Any sale of our common stock to ApolloBio under the ApolloBio Equity Agreement will cause dilution and the sale of the shares of common stock acquired by ApolloBio thereunder could cause the price of our common stock to decline.

We have entered into the ApolloBio Equity Agreement to sell up to $35.0 million of our common stock to ApolloBio. If the closing conditions under the ApolloBio Equity Agreement are satisfied, the resulting sale of shares of our common stock thereunder will result in immediate dilution to the holders of shares of our common stock. Under the ApolloBio Equity Agreement, ApolloBio will purchase shares of our common stock at a price per share of $8.20. If this transaction is consummated at a time when the price of our common stock is greater than $8.20 per share, the holders of shares of our common stock could experience additional dilution due to the discounted sale of such shares under the ApolloBio Equity Agreement. In addition, any sales of shares of common stock by ApolloBio could cause the market price of our common stock to decline.

We have entered into the ApolloBio Registration Rights Agreement requiring us to register all the shares purchased by ApolloBio within ten business days of the closing of the ApolloBio Equity Agreement.

In connection with the ApolloBio Equity Agreement, we entered into the ApolloBio Registration Rights Agreement pursuant to which we agreed to file a registration statement with the SEC covering the offer and resale of all of the shares of common stock purchased by ApolloBio pursuant to the ApolloBio Equity Agreement. All shares acquired by ApolloBio and resold pursuant to an effective registration statement covering such shares, will be freely tradable. ApolloBio may sell none, some, or all of the shares of common stock purchased from us at any time under such registration statement. Depending upon market liquidity at the time, a sale of such shares at any given time could cause the trading price of our common stock to decline. The sale of a substantial number of shares of our common stock, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

Consummation of the ApolloBio Collaboration Agreement and the ApolloBio Equity Agreement is contingent upon the satisfaction of several closing conditions that may not occur. If these closing conditions do not occur, we would not be able to license these products in China, Hong Kong, Macau, Taiwan and Korea without a new licensing partner and we would not receive the proceeds and royalties expected from the agreements.

Satisfaction of the closing conditions for the ApolloBio Collaboration Agreement and the ApolloBio Equity Agreement requires ApolloBio corporate approval and currency and regulatory approvals in China. Although ApolloBio has submitted much of the required information to the relevant regulatory bodies, it has not yet received currency or regulatory approval, nor has it attained corporate approval for the transactions. If ApolloBio is not able to secure such corporate or currency and regulatory approvals, the transactions contemplated by the ApolloBio Collaboration Agreement and the ApolloBio Equity Agreement will not be consummated, in which case, we will not be entitled to receive the $15.0 million in upfront payments or the up to $20.0 million in milestone payments under the ApolloBio Collaboration Agreement or the up to $35.0 million in proceeds from the sale of our common stock under the ApolloBio Equity Agreement. The failure to receive such payments could harm our business prospects or require us to raise additional capital through other means. Additionally, if the closing conditions for the ApolloBio Collaboration Agreement and the ApolloBio Equity Agreement are not satisfied, we may not be able to market VGX-3100 in China, Hong Kong, Macau, Taiwan or Korea without finding a new licensing partner, which may be costly and time-consuming.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES
Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES
Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

(a) Exhibits

Exhibit Number	Description of Document
10.1	Second Amendment to the Lease Agreement dated June 22, 2017 between Brandywine Operating Partnership, L.P. and Inovio Pharmaceuticals, Inc. (Filed herewith.)
10.2	Sublease dated June 21, 2017 between Accolade, Inc. and Inovio Pharmaceuticals, Inc. (Filed herewith.)
31.1	Certification of Chief Executive Officer Pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

* This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings.

PHARMACEUTICALS, INC.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Inovio Pharmaceuticals, Inc.

Date: August 8, 2017 By /s/ J. JOSEPH KIM
J. Joseph Kim
President, Chief Executive Officer and Director (Principal Executive Officer)

Date: August 8, 2017 By /s/ PETER KIES
Peter Kies Chief Financial Officer (Principal Financial and Accounting Officer)