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

FORM 10-Q

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

For the quarterly period ended June 30, 2016

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 Number: 000-21088

VICAL INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**93-0948554**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
10390 Pacific Center Court San Diego, California	**92121**
(Address of principal executive offices)	**(Zip Code)**

(858) 646-1100
(Registrant's telephone number, including area code)
(Former name, former address and former fiscal year, if changed since last report)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Total shares of common stock outstanding at July 15, 2016: 9,206,383

VICAL INCORPORATED

FORM 10-Q

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

VICAL INCORPORATED
B ALANCE SHEETS
(In thousands, except par value data)
(Unaudited)

	June 30, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,229	$ 13,450
Marketable securities, available-for-sale	27,746	23,258
Restricted cash	3,246	3,246
Receivables and other assets	4,751	4,544
Total current assets	40,972	44,498
Long-term investments	2,238	2,052
Property and equipment, net	1,578	1,873
Intangible assets, net	868	1,300
Other assets	191	191
Total assets	$ 45,847	$ 49,914
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 3,191	$ 3,912
Deferred revenue	122	250
Total current liabilities	3,313	4,162
Long-term liabilities:		
Deferred rent	90	359
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.01 par value, 5,000 shares authorized, none issued and outstanding	—	—
Common stock, $0.01 par value, 160,000 shares authorized, 9,206 and 9,154 shares issued and outstanding at June 30, 2016, and December 31, 2015, respectively	92	92
Additional paid-in capital	450,752	450,166
Accumulated deficit	(408,583)	(404,905)
Accumulated other comprehensive income	183	40
Total stockholders' equity	42,444	45,393
Total liabilities and stockholders' equity	$ 45,847	$ 49,914

See accompanying notes to unaudited financial statements

VICAL INCORPORATED
S TATEMENTS OF OPERATIONS
(In thousands, except per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	**2015**	**2016**	**2015**
Revenues:				
Contract revenue	$ 3,630	$ 3,681	$ 7,718	$ 7,955
License and royalty revenue	492	495	1,008	1,165
Total revenues	4,122	4,176	8,726	9,120
Operating expenses:				
Research and development	2,303	2,457	4,781	6,094
Manufacturing and production	1,221	2,379	4,067	5,320
General and administrative	1,919	2,132	3,709	4,355
Total operating expenses	5,443	6,968	12,557	15,769
Loss from operations	(1,321)	(2,792)	(3,831)	(6,649)
Other income:				
Investment and other income, net	66	30	153	66
Net loss	$ (1,255)	$ (2,762)	$ (3,678)	$ (6,583)
Basic and diluted net loss per share	$ (0.14)	$ (0.30)	$ (0.40)	$ (0.72)
Weighted average shares used in computing basic and diluted net loss per share	9,240	9,189	9,232	9,141

See accompanying notes to unaudited financial statements

VICAL INCORPORATED
STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	**2015**	**2016**	**2015**
Net loss	$ (1,255)	$ (2,762)	$ (3,678)	$ (6,583)
Other comprehensive gain (loss):				
Unrealized gain (loss) on available-for-sale and long-term marketable securities:				
Unrealized gain (loss) arising during holding period, net of tax benefit of $19 and $0 for three months ended June 30, 2016 and 2015, respectively, and $63 and $0 for six months ended June 30, 2016 and 2015, respectively	48	(54)	143	25
Other comprehensive gain (loss)	48	(54)	143	25
Total comprehensive loss	$ (1,207)	$ (2,816)	$ (3,535)	$ (6,558)

See accompanying notes to unaudited financial statements

VICAL INCORPORATED
S TATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2016	**2015**
Cash flows from operating activities:		
Net loss	$ (3,678)	$ (6,583)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	556	595
Write-off of abandoned patents	371	46
Loss on sale of property and equipment	—	2
Compensation expense related to stock options and awards	591	1,097
Purchase of technology license with common stock	—	775
Changes in operating assets and liabilities:		
Receivables and other assets	(208)	(330)
Accounts payable and accrued expenses	(689)	(1,208)
Deferred revenue	(128)	520
Deferred rent	(237)	(205)
Net cash used in operating activities	(3,422)	(5,291)
Cash flows from investing activities:		
Maturities of marketable securities	12,422	11,435
Purchases of marketable securities	(17,011)	(6,852)
Purchases of property and equipment	(205)	(33)
Patent expenditures	—	(45)
Net cash (used in) provided by investing activities	(4,794)	4,505
Cash flows from financing activities:		
Proceeds from issuance of common stock	5	2
Payment of withholding taxes for net settlement of restricted stock units	(10)	(20)
Net cash used in financing activities	(5)	(18)
Net decrease in cash and cash equivalents	(8,221)	(804)
Cash and cash equivalents at beginning of period	13,450	20,471
Cash and cash equivalents at end of period	$ 5,229	$ 19,667

See accompanying notes to unaudited financial statements

1. BASIS OF PRESENTATION

Vical Incorporated, or the Company, a Delaware corporation, was incorporated in April 1987 and has devoted substantially all of its resources since that time to its research and development programs. The Company researches and develops biopharmaceutical products, including those based on its patented DNA delivery technologies, for the prevention and treatment of serious or life-threatening diseases.

All of the Company's potential products are in research and development phases. No revenues have been generated from the sale of any such products, nor are any such revenues expected for at least the next several years. The Company earns revenue from research and development agreements with pharmaceutical collaborators and from contract manufacturing agreements. Most of the Company's product candidates will require significant additional research and development efforts, including extensive preclinical and clinical testing. All product candidates that advance to clinical testing will require regulatory approval prior to commercial use, and will require significant costs for commercialization. There can be no assurance that the Company's research and development efforts, or those of its collaborators, will be successful. The Company expects to continue to incur substantial losses and not generate positive cash flows from operations for at least the next several years. No assurance can be given that the Company can generate sufficient product revenue to become profitable or generate positive cash flows from operations.

The unaudited financial statements at June 30, 2016, and for the three and six months ended June 30, 2016 and 2015, have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission, or SEC, and with accounting principles generally accepted in the United States applicable to interim financial statements. These unaudited financial statements have been prepared on the same basis as the audited financial statements included in the Company's Annual Report on Form 10-K and include all adjustments, consisting of only normal recurring accruals, which in the opinion of management are necessary to present fairly the Company's financial position as of the interim date and results of operations for the interim periods presented. Interim results are not necessarily indicative of results expected for a full year or future periods. The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and 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 materially from those estimates. These unaudited financial statements should be read in conjunction with the Company's audited financial statements for the year ended December 31, 2015, included in its Annual Report on Form 10-K filed with the SEC.

On May 26, 2016, the Company amended its certificate of incorporation to effect a one-for-ten (1:10) reverse stock split. This reverse stock split became effective as of the close of business on May 26, 2016. The reverse stock split had no effect on the par value of its common stock and did not reduce the number of authorized shares of common stock but reduced the number of outstanding shares of common stock by the ratio. Accordingly, the outstanding shares, stock award disclosures, net loss per share, and other per share disclosures for all periods presented have been retrospectively adjusted to reflect the impact of this reverse stock split.

The reverse stock split did effect a proportionate adjustment to the per share exercise price and the number of shares of common stock issuable upon the exercise of outstanding stock options, the number of shares of common stock issuable upon the vesting of restricted stock awards, and the number of shares of common stock eligible for issuance under our stock incentive plan. No fractional shares were issued in connection with the reverse stock split. Each stockholder's percentage ownership and proportional voting power generally remained unchanged as a result of the reverse stock split.

Cash, Cash Equivalents and Marketable Securities

Cash and cash equivalents consist of cash and highly liquid securities with original maturities at the date of acquisition of ninety days or less and can be liquidated without prior notice or penalty. Investments with an original maturity of more than ninety days are considered marketable securities and have been classified by management as available-for-sale. These investments are classified as current assets, even though the stated maturity date may be one year or more beyond the current balance sheet date which reflects management's intention to use the proceeds from sales of these securities to fund its operations, as necessary. Such investments are carried at fair value, with unrealized gains and losses included as a separate component of stockholders' equity. Realized gains and losses from the sale of available-for-sale securities or the amounts, net of tax, reclassified out of accumulated other comprehensive income (loss), if any, are determined on a specific identification basis.

Restricted Cash

The Company is required to maintain a letter of credit securing an amount equal to twelve months of the current monthly installment of base rent for the term of its primary facilities lease, which ends in December 2018. Under certain circumstances, the Company may be able to eliminate the need for the letter of credit. As of June 30, 2016, and December 31, 2015, restricted cash of $3.2 million was pledged as collateral for this letter of credit.

Revenue Recognition

Revenue is recognized when the four basic criteria of revenue recognition are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services rendered; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured. Certain portions of the Company's revenue are generated through manufacturing contracts and stand-alone license agreements.

Multiple-Element Arrangements

The Company has entered into multiple-element arrangements. In order to account for the multiple-element arrangements, the Company identifies the deliverables included within the agreement and evaluates which deliverables represent separate units of accounting. 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) must have value to the customer on a standalone basis and, 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.

A delivered item is considered a separate unit of accounting when the delivered item has value to the partner on a standalone basis based on the consideration of the relevant facts and circumstances for each arrangement. Factors considered in this determination include the research capabilities of the partner and the availability of research expertise in this field in the general marketplace. 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, or 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. If facts and circumstances dictate that the license has standalone value from the undelivered items, which generally include research and development services and the manufacture of drug products, the license is identified as a separate unit of accounting and the amounts allocated to the license are recognized upon the delivery of the license, assuming the other revenue recognition criteria have been met. However, if the amounts allocated to the license through the relative selling price allocation exceed the upfront license fee, the amount recognized upon the delivery of the license is limited to the upfront fee received. If facts and circumstances dictate that the license does not have standalone value, the transaction price, including any upfront license fee payments received, are allocated to the identified separate units of accounting and recognized as those items are delivered.

The terms of the Company's collaboration agreements provide for milestone payments upon achievement of certain regulatory and commercial events. Under the Milestone Method, the Company recognizes 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.

Contract Services, Grant and Royalty Revenue

The Company recognizes revenues from contract services and federal government research grants during the period in which the related expenditures are incurred and related payments for those services are received or collection is reasonably assured. Royalties to be received based on sales of licensed products by the Company's collaborators incorporating the Company's licensed technology are recognized when received.

Manufacturing and Production Costs

Manufacturing and production costs include expenses related to manufacturing contracts and expenses for the production of plasmid DNA for use in the Company's research and development efforts. Manufacturing expenses related to manufacturing contracts are deferred and expensed when the related revenue is recognized. Production expenses related to the Company's research and development efforts are expensed as incurred.

Net Loss Per Share

Basic and diluted net loss per share has been computed using the weighted-average number of shares of common stock outstanding during the period. The weighted average number of shares used to compute diluted loss per share excludes any assumed exercise of stock options and any assumed issuance of common stock under restricted stock units as the effect would be antidilutive. Common stock equivalents of 11,860 and 51,859 for the three months ended June 30, 2016 and 2015, respectively, were excluded from the calculation because of their antidilutive effect. Common stock equivalents of 6,168 and 63,189 for the six months ended June 30, 2016 and 2015, respectively, were excluded from the calculation because of their antidilutive effect.

Stock-Based Compensation

The Company records its compensation expense associated with stock options and other forms of equity compensation based on their fair value at the date of grant using the Black-Scholes-Merton option pricing model. Stock-based compensation includes amortization related to stock option awards based on the estimated grant date fair value. Stock-based compensation expense related to stock options includes an estimate for forfeitures and the portion that is ultimately expected to vest is recognized ratably over the vesting period of the option. In addition, the Company records expense related to RSUs granted based on the fair value of those awards on the grant date. The fair value related to the RSUs is amortized to expense over the vesting term of those awards. Stock-based compensation expense related to RSUs includes an estimate for forfeitures and the portion expected to vest is recognized ratably over the requisite service period. The expected forfeiture rate of all equity-based compensation is based on observed historical patterns of the Company's employees and was estimated to be 8.75% annually for each of the six months ended June 30, 2016 and 2015.

Stock-based compensation expense for a stock-based award with a performance condition is recognized when the achievement of such performance condition is determined to be probable. If the outcome of such performance condition is not determined to be probable or is not met, no compensation expense is recognized and any previously recognized compensation expense is reversed.

Recent Accounting Pronouncements

In May 2014, the FASB issued guidance that outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The guidance provides that an entity recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This guidance also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments, and assets recognized from costs incurred to obtain or fulfill a contract. The guidance allows for either full retrospective or modified retrospective adoption and will become effective for the Company in the first quarter of 2018. The Company is evaluating the alternative transition methods and the potential effects of the adoption of this update on its financial statements.

In August 2014, the FASB issued an amendment to the accounting guidance related to the evaluation of an entity to continue as a going concern. The amendment establishes management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern in connection with preparing financial statements for each annual and interim reporting period. The amendment also gives guidance to determine whether to disclose information about relevant conditions and events when there is substantial doubt about an entity's ability to continue as a going concern. The amended guidance is effective prospectively for fiscal years beginning after December 15, 2016. The new guidance will not have an impact on the Company's financial position, results of operations or cash flows.

In February 2016, the FASB issued an amendment to the accounting guidance related to the accounting for leasing transactions. The new standard requires a lessee to record on the balance sheet the assets and liabilities for the rights and obligations created by leases with lease terms of more than 12 months and will require both lessees and lessors to disclose certain key information about lease transactions. The standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is evaluating the effect that the adoption of the new guidance will have on its financial statements.

2. STOCK-BASED COMPENSATION

Total stock-based compensation expense was allocated to research and development, manufacturing and production and general and administrative expense as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Research and development	$ 77	$ 105	$ 159	$ 216
Manufacturing and production	30	47	63	81
General and administrative	171	374	369	800
Total stock-based compensation expense	$ 278	$ 526	$ 591	$ 1,097

During the six months ended June 30, 2016 and 2015, the Company granted stock-based awards with a total estimated value of $0.6 million and $1.9 million, respectively. At June 30, 2016, total unrecognized estimated compensation expense related to unvested stock-based awards granted prior to that date was $1.1 million, which is expected to be recognized over a weighted-average period of 1.4 years. Stock-based awards granted during the six months ended June 30, 2016 and 2015, were equal to 3.6% and 3.3%, respectively, of the outstanding shares of common stock at the end of the applicable period.

3. MARKETABLE SECURITIES, AVAILABLE FOR SALE

The following is a summary of available-for-sale marketable securities (in thousands):

June 30, 2016	Amortized Cost	Unrealized Gain	Unrealized Loss	Market Value
U.S. treasuries	$ 17,801	$ 12	—	$ 17,813
Certificates of deposit	9,933	—	—	9,933
	$ 27,734	$ 12	$ —	$ 27,746

December 31, 2015	Amortized Cost	Unrealized Gain	Unrealized Loss	Market Value
U.S. treasuries	$ 7,027	$ —	$ 8	$ 7,019
Corporate bonds	1,000	—	—	1,000
Certificates of deposit	15,239	—	—	15,239
	$ 23,266	$ —	$ 8	$ 23,258

At June 30, 2016, none of these securities were scheduled to mature outside of one year. The Company did not realize any gains or losses on sales of available-for-sale securities for the six months ended June 30, 2016. As of June 30, 2016, none of the securities had been in a continuous material unrealized loss position longer than one year.

4. OTHER BALANCE SHEET ACCOUNTS

Accounts payable and accrued expenses consisted of the following (in thousands):

	June 30, 2016	December 31, 2015
Employee compensation	$ 1,701	$ 2,220
Clinical trial accruals	67	102
Accounts payable	460	733
Deferred rent	529	496
Other accrued liabilities	434	361
Total accounts payable and accrued expenses	$ 3,191	$ 3,912

5. LONG-TERM INVESTMENTS

As of June 30, 2016, the Company held an auction rate security with a par value of $2.5 million. This auction rate security has not experienced a successful auction since the liquidity issues experienced in the global credit and capital markets in 2008. As a result, the security is classified as a long-term investment as it is scheduled to mature in 2038. The security was rated A- by Standard and Poor's as of June 30, 2016. The security continues to pay interest according to its stated terms.

The valuation of the Company's auction rate security is subject to uncertainties that are difficult to predict. The fair value of the security is estimated utilizing a discounted cash flow analysis. The key drivers of the valuation model include the expected term, collateral underlying the security investment, the creditworthiness of the counterparty, the timing of expected future cash flows, discount rates, liquidity and the expected holding period. The security was also compared, when possible, to other observable market data for securities with similar characteristics. As of June 30, 2016, the inputs used in the Company's discounted cash flow analysis assumed an interest rate of 1.00%, an estimated redemption period of five years and a discount rate of 1.00%. Based on the valuation of the security, the Company has recognized cumulative losses of $0.4 million as of June 30, 2016, none of which were realized during the six months ended June 30, 2016. The losses when recognized are included in investment and other income. The market value of the security has partially recovered. Included in other comprehensive income are unrealized gains of $123,000 and $9,000 for the six months ended June 30, 2016 and 2015, respectively. As of June 30, 2016, the Company had recorded cumulative unrealized gains of $0.4 million. The resulting carrying value of the auction rate security at June 30, 2016, was $2.2 million. Any future decline in market value may result in additional losses being recognized.

6. FAIR VALUE MEASUREMENTS

The Company measures fair value as an exit price, representing the amount 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. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. Fair value measurements are based on a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1: Observable inputs such as quoted prices in active markets;
- Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Cash equivalents, marketable securities and long-term investments measured at fair value are classified in the table below in one of the three categories described above (in thousands):

	Fair Value Measurements			
June 30, 2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Certificates of deposit	$ 9,933	$ —	$ —	$ 9,933
Money market funds	3,540	—	—	3,540
U.S. treasuries	17,813	—	—	17,813
Auction rate securities	—	—	2,238	2,238
	$ 31,286	$ —	$ 2,238	$ 33,524

	Fair Value Measurements			
December 31, 2015	**Level 1**	**Level 2**	**Level 3**	**Total**
Certificates of deposit	$ 15,239	$ —	$ —	$ 15,239
U.S. treasuries	7,019	—	—	7,019
Corporate bonds	—	1,000	—	1,000
Auction rate securities	—	—	2,052	2,052
	$ 22,258	$ 1,000	$ 2,052	$ 25,310

The Company's investments in U.S. treasury securities, certificates of deposit and money market funds are valued based on publicly available quoted market prices for identical securities as of June 30, 2016. The Company determines the fair value of corporate bonds and other government-sponsored enterprise related securities with the aid of valuations provided by third parties using proprietary valuation models and analytical tools. These valuation models and analytical tools use market pricing or similar instruments that are both objective and publicly available, including matrix pricing or reported trades, benchmark yields, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids and/or offers. The Company validates the valuations received

from its primary pricing vendors for its level 2 securities by examining the inputs used in that vendor's pricing process and determines whether they are reasonable and observable. The Company also compares those valuations to recent reported trades for those securities. The Company did not transfer any investments between level categories during the three and six months ended June 30, 2016. The valuation of the Company's investments in auction rate securities, which includes significant unobservable inputs, is more fully described in Note 5.

Activity for assets measured at fair value using significant unobservable inputs (Level 3) is presented in the table below (in thousands):

Balance at December 31, 2015	$	2,052
Total unrealized gains, excluding tax impact, included in other comprehensive loss		186
Balance at June 30, 2016	$	2,238
Total gains or losses for the period included in net loss attributable to the change in unrealized gains or losses relating to assets still held at the reporting date	$	—

7. COMMITMENTS AND CONTINGENCIES

In late October and early November 2013, following the Company's announcement of the results of its Phase 3 trial of Allovectin® and the subsequent decline of the price of the Company's common stock, two putative securities class action complaints were filed in the U.S. District Court for the Southern District of California against the Company and certain of its current and former officers. On February 26, 2014, the two cases were consolidated into one action and a lead plaintiff and lead counsel were appointed ("Consolidation Order"). On May 12, 2014, the lead plaintiff filed a first amended consolidated complaint alleging that the defendants violated Section 10(b) and 20(a) of the Securities Exchange Act of 1934 by making materially false and misleading statements regarding our business prospects and the prospects for Allovectin®, thereby artificially inflating the price of the Company's common stock. On June 9, 2014, the defendants filed a motion to dismiss the first amended complaint and a motion to strike certain allegations in the amended complaint. On March 9, 2015, the Court granted defendants' motion to dismiss the first amended complaint and terminated as moot defendants' motion to strike, or Order. The lead plaintiff was granted leave to amend his first amended complaint on or before March 25, 2015. The lead plaintiff chose not to amend his complaint and instead stipulated to an entry of judgment. On April 28, 2015, the Court entered final judgment dismissing the action, or Judgment. On May 28, 2015, the lead plaintiff appealed the Judgment to the U.S. Court of Appeals for the Ninth Circuit. That same day, another group of the Company's stockholders that had previously moved for appointment as lead plaintiff, or the Vical Investor Group, also appealed the Judgment, as well as the Consolidation Order, to the U.S. Court of Appeals for the Ninth Circuit. On August 3, 2015, the Vical Investor Group voluntarily dismissed its appeal. On October 8, 2015, the lead plaintiff-appellant filed an opening brief in support of his appeal. Defendants filed an answering brief on December 9, 2015. On January 27, 2016, lead plaintiff-appellant filed a motion to dismiss his appeal with prejudice, which was joined by defendants. On February 1, 2016, the Ninth Circuit granted the joint motion and dismissed the appeal.

In the ordinary course of business, the Company may become a party to additional lawsuits involving various matters. The Company is unaware of any such lawsuits presently pending against it which, individually or in the aggregate, are deemed to be material to the Company's financial condition or results of operations.

The Company prosecutes its intellectual property vigorously to obtain the broadest valid scope for its patents. Due to uncertainty of the ultimate outcome of these matters, the impact on future operating results or the Company's financial condition is not subject to reasonable estimates.

8. ASTELLAS OUT-LICENSE AGREEMENTS

In July 2011, the Company entered into license agreements with Astellas Pharma Inc., or Astellas, granting Astellas exclusive, worldwide, royalty-bearing licenses under certain of the Company's know-how and intellectual property to develop and commercialize certain products containing plasmids encoding certain forms of cytomegalovirus, glycoprotein B and/or phosphoprotein 65, including ASP0113 (TransVax™) but excluding CyMVectin™.

Under the terms of the agreements, the Company is performing research and development services and manufacturing services which are being paid for by Astellas. During the three months ended June 30, 2016 and 2015, the Company recognized $3.6 million and $3.7 million, respectively, of revenue related to these contract services. During the six months ended June 30, 2016 and 2015, the Company recognized $7.5 million and $8.0 million, respectively, of revenue related to these contract services. The Company also recognized $0.9 million and $1.0 million in license revenue under the Astellas agreements during the six months ended June 30, 2016 and 2015, respectively.

9. ASTELLAS IN-LICENSE AGREEMENTS

In March 2015, the Company entered into license and stock purchase agreements with Astellas, pursuant to which Astellas granted the Company exclusive worldwide license to develop and commercialize a novel antifungal, VL-2397. As consideration for the rights under the license, the Company issued 861,216 shares of its common stock to Astellas and made an up-front payment of $250,000 in cash. The $250,000 cash payment and the fair value of the common stock issued of $775,094 were included in research and development expenses during the six months ending June 30, 2015. Astellas is also eligible to receive up to $99.0 million in aggregate milestone payments, the vast majority of which are commercial and sales milestones, and single-digit royalties on net sales of commercial products.

10. SUBSEQUENT EVENTS

On August 1, 2016, the Company entered into a stock purchase agreement with AnGes MG, Inc., or AnGes, an existing shareholder, to purchase 1,841,420 shares of the Company's common stock in a private placement. The shares were sold at a price of $4.24 per share, the 90-day volume weighted average price of the Company's common stock. Gross proceeds totaled approximately $7.8 million. Immediately following the closing of the private placement, AnGes' equity position in the Company increased from 2.4% to approximately 18.6% of the Company's outstanding shares. The private placement closed on August 2, 2016.

The shares will be subject to a two-year lock-up period in which they may not be sold and AnGes has agreed to not increase its ownership position beyond 19.9% and to refrain from taking certain other actions with respect to the Company's stock, subject to certain conditions. AnGes is entitled to have a representative attend meetings of the Company's Board of Directors in a non-voting capacity and may in the future be entitled to have a representative appointed to the Company's Board of Directors, subject to certain conditions. AnGes has also agreed to vote its shares in accordance with the recommendations of the Company's Board of Directors for so long as it continues to hold a specified percentage of the Company's outstanding common stock. The Company also agreed under certain circumstances in the future to register the shares for resale by AnGes.

The Company leases approximately 68,400 square feet of manufacturing, research laboratory and office space at a single site in San Diego, California, under a lease agreement that expires in August 2017. In July 2016, the term of the lease was extended for an additional 16 months through December 2018, resulting in additional obligation of $2.9 million.

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

This Quarterly Report on Form 10-Q, or Report, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, including statements regarding our business, our financial position, the research and development of biopharmaceutical products based on our patented DNA delivery and other technologies, the funding of our research and development efforts, and other statements describing our goals, expectations, intentions or beliefs. Such statements reflect our current views and assumptions and are subject to risks and uncertainties, particularly those inherent in the process of developing and commercializing biopharmaceutical products based on our patented DNA delivery and other technologies. Actual results could differ materially from those projected herein. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in our Annual Report on Form 10-K for the year ended December 31, 2015, and in our other filings with the SEC, and those identified in Part II, Item 1A entitled "Risk Factors" beginning on page 21 of this Report. As a result, you are cautioned not to rely on these forward-looking statements. We disclaim any duty to update any forward-looking statement to reflect events or circumstances that occur after the date on which such statement is made.

Overview

We research and develop biopharmaceutical products, including those based on our patented DNA delivery technologies, for the prevention and treatment of serious or life-threatening diseases.

We currently have three active product development programs, independent or partnered, in the clinical testing stage in the area of infectious disease comprised of:

- An ongoing Phase 3 clinical trial of ASP0113 for prevention of cytomegalovirus, or CMV, reactivation in hematopoietic stem cell transplant recipients and an ongoing Phase 2 clinical trial of ASP0113 for prevention of CMV infection in kidney transplant recipients, both in collaboration with Astellas Pharma Inc., or Astellas. Astellas expects enrollment in the Phase 3 clinical trial to be completed during the third quarter of 2016 with top-line data expected to be available in the fourth quarter of 2017. Enrollment in the Phase 2 trial was completed in May of 2015 and top-line results are expected during the third quarter of 2016.
- A completed Phase 1/2 clinical study of our therapeutic genital herpes vaccine, designed to reduce viral shedding and genital herpes lesions in herpes simplex virus type 2, or HSV-2, infected patients. The randomized, double-blind, placebo trial enrolled patients across seven U.S. sites and evaluated a monovalent (gD) vaccine and a bivalent (gD + UL46) vaccine. In June 2015, we announced top-line results from the trial. Neither the monovalent nor bivalent vaccine met the primary endpoint (reduction of viral shedding from baseline). On the prospectively defined secondary endpoints, the bivalent vaccine achieved statistically significant reductions in the rate of genital lesions and viral load from positive swabs versus baseline. Patients were also followed for safety for 12 months and efficacy for nine months after their final vaccine dose. The 9-month efficacy data showed that the bivalent vaccine continued to achieve statistically significant reductions in the clinically meaningful secondary endpoint of genital lesion rate when compared to the pre-vaccination period, an effect that was durable to 9 months. Neither the placebo nor the monovalent vaccine groups achieved statistical significance on this endpoint at 9 months after vaccination. Furthermore, at the 9-month time point, the bivalent vaccine showed a favorable trend in recurrence rate, time to first recurrence, and proportion of patients who are recurrence-free. The bivalent vaccine elicited significant increases in antigen-specific interferon gamma producing T cells, indicating biologic activity. The FDA is currently reviewing our Phase 2 trial design that is intended to evaluate the efficacy of the bivalent vaccine using clinically relevant endpoints rather than virologic endpoints. We plan to initiate a Phase 2 trial of the bivalent vaccine during the second half of 2016.
- An ongoing first-in-human Phase 1 clinical trial of VL-2397 for invasive fungal infections, including invasive aspergillus. The randomized, double-blind, placebo-controlled trial is intended to evaluate safety, tolerability and pharmacokinetics of VL-2397 in healthy volunteers. The study design is composed of seven single ascending dose cohorts followed by four multiple ascending dose cohorts. The trial is expected to be complete by the end of 2016. The FDA has granted us Fast Track, qualified infectious disease product and orphan drug designations for VL-2397 for the treatment of invasive aspergillosis. This invasive fungal infection is associated with high morbidity and mortality in immunocompromised patients, underscoring the need for new antifungal therapies. We are working closely with a core team of expert advisors to design a proof of concept Phase 2 efficacy study of VL-2397 in the treatment of patients with invasive aspergillosis.

In addition, we have licensed complementary technologies from leading research institutions and biopharmaceutical companies.

Product Development

We, together with our licensees and collaborators, are developing a number of DNA-based vaccines and other therapeutics for the prevention or treatment of infectious diseases. The table below summarizes our independent programs and corporate and government collaborations.

Product/Concept	Intended Use	Development Status[1]	Lead Developer
Independent Programs			
Therapeutic and prophylactic vaccines for HSV-2	Prevent and protect against recurring flare-ups, reduce viral shedding and transmission	Phase 1/2 complete	Vical
CyMVectin™ prophylactic vaccine for CMV	Prevent infection during pregnancy to preclude fetal transmission	Preclinical	Vical
VL-2397 antifungal	Treatment of invasive fungal infections	Phase 1	Vical
Corporate Collaborations			
ASP0113 therapeutic vaccine for CMV	Protect against infection after hematopoietic stem cell transplantation	Phase 3	Astellas
ASP0113 therapeutic vaccine for CMV	Protect against infection after solid organ transplantation	Phase 2	Astellas
ONCEPT® therapeutic cancer vaccine encoding human tyrosinase	Adjunct treatment to increase survival time of dogs with oral melanoma	Marketed in the United States	Merial

1 "Preclinical" indicates that a specific product candidate in a nonclinical setting has shown functional activity that is relevant to a targeted medical need, and is advancing toward initial human clinical testing. "Phase 1" clinical trials are typically conducted with a small number of patients or healthy subjects to evaluate safety, determine a safe dosage range, identify side effects, and, if possible, gain early evidence of effectiveness. "Phase 2" clinical trials are conducted with a larger group of patients to evaluate effectiveness of an investigational product for a defined patient population, and to determine common short-term side effects and risks associated with the product candidate. "Phase 3" clinical trials involve large scale, multi-center, comparative trials that are conducted with patients afflicted with a target disease to evaluate the overall benefit-risk relationship of the investigational product and to provide an adequate basis for product labeling.

Research, Development and Manufacturing Programs

To date, we have not received revenues from the sale of our independently developed pharmaceutical products and have received minimal revenues from the sale of commercially marketed products by our licensees. We earn revenues by performing services under research and development and manufacturing contracts, from grants and from licensing access to our proprietary technologies. Revenues by source were as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
Source	**2016**	**2015**	**2016**	**2015**
Astellas supply and services contract	$ 3.6	$ 3.7	$ 7.5	$ 8.0
Astellas license	0.4	0.5	0.9	1.0
Other contracts, licenses and royalties	0.1	—	0.3	0.1
Total revenues	$ 4.1	$ 4.2	$ 8.7	$ 9.1

Research, development, manufacturing and production costs by major program, as well as other costs, were as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
Program	**2016**	**2015**	**2016**	**2015**
CMV	$ 1.9	$ 3.4	$ 5.7	$ 7.2
HSV-2	0.7	1.1	1.2	2.5
VL-2397	0.9	—	1.7	—
Other research, development, manufacturing and production	—	0.3	0.2	1.7
Total research, development, manufacturing and production	$ 3.5	$ 4.8	$ 8.8	$ 11.4

Our current development focus includes our novel DNA vaccines for CMV and HSV-2, and our antifungal for the treatment of invasive fungal infections.

These programs will require significant additional funds to advance through development to commercialization. From inception through June 30, 2016, we had spent approximately $18.1 million on our HSV-2 program, $113.5 million on our CMV programs and $5.1 million on our VL-2397 program.

We have other product candidates in the research stage. It can take many years to develop product candidates from the initial decision to screen product candidates, perform preclinical and safety studies, and perform clinical trials leading up to possible approval of a product by the FDA or comparable foreign agencies. The outcome of the research is unknown until each stage of the testing is completed, up through and including registration-enabling clinical trials. Accordingly, we are unable to predict which potential product candidates we may proceed with, the time and cost to complete development, and ultimately whether we will have a product approved by the FDA or comparable foreign agencies.

As a result, we expect to incur substantial operating losses for at least the next several years, due primarily to the advancement of our research and development programs, the cost of preclinical studies and clinical trials, spending for outside services, costs related to maintaining our intellectual property portfolio, costs due to manufacturing activities, costs related to our facilities, and possible advancement toward commercialization activities.

Critical Accounting Policies and Estimates

The preparation and presentation of financial statements in accordance with accounting principles generally accepted in the United States requires that management make a number of assumptions and estimates that affect the reported amounts of assets, liabilities, revenues and expenses in our financial statements and accompanying notes. Management bases its estimates on historical information and assumptions believed to be reasonable. Although these estimates are based on management's best knowledge of current events and circumstances that may impact us in the future, they are inherently uncertain and actual results may differ materially from these estimates.

Our critical accounting policies are those that affect our financial statements materially and involve a significant level of judgment by management. Our critical accounting policies regarding revenue recognition are in the following areas: license and royalty agreements, manufacturing contracts, contract services and grant revenues. Our critical accounting policies also include recognition of research and development expenses and the valuation of long-lived and intangible assets.

There have been no material changes to our critical accounting policies and estimates as compared to those discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

Recent Accounting Pronouncements

For information on the recent accounting pronouncements which may impact our business, see Note 1 of the Notes to Financial Statements included in this Report.

Results of Operations

Three Months Ended June 30, 2016, Compared with Three Months Ended June 30, 2015

Total Revenues. Total revenues decreased $0.1 million to $4.1 million for the three months ended June 30, 2016, from $4.2 million for the three months ended June 30, 2015. This decrease was primarily due to a decrease in the delivery of ASP0113 material which was partially offset by an increase in billable research activities under our license agreements with Astellas.

Research and Development Expenses. Research and development expenses decreased $0.2 million, or 6.3%, to $2.3 million for the three months ended June 30, 2016, from $2.5 million for the three months ended June 30, 2015. This decrease was primarily due to a decrease in consulting fees.

Manufacturing and Production Expenses. Manufacturing and production expenses decreased $1.2 million, or 48.7%, to $1.2 million for the three months ended June 30, 2016, from $2.4 million for the three months ended June 30, 2015. This decrease was primarily due to a net increase in deferred contract costs capitalized during the three months ended June 30, 2016 related to materials manufactured under our supply agreement with Astellas.

General and Administrative Expenses. General and administrative expenses decreased $0.2 million, or 10.0%, to $1.9 million for the three months ended June 30, 2016, from $2.1 million for the three months ended June 30, 2015. This decrease was primarily due to a decrease in employee stock based compensation and legal fees related to the securities class action litigation that was concluded in 2015.

Investment and Other Income, Net. Investment and other income, net, increased $36,000 to $66,000 for the three months ended June 30, 2016, from $30,000 for the three months ended June 30, 2015.

Six Months Ended June 30, 2016, Compared with Six Months Ended June 30, 2015

Total Revenues. Total revenues decreased $0.4 million to $8.7 million for the six months ended June 30, 2016, from $9.1 million for the six months ended June 30, 2015. This decrease was primarily due to a decrease in the delivery of ASP0113 material which was partially offset by an increase in billable research activities under our license agreements with Astellas.

Research and Development Expenses. Research and development expenses decreased $1.3 million, or 21.5%, to $4.8 million for the six months ended June 30, 2016, from $6.1 million for the six months ended June 30, 2015. This decrease was primarily due to $1.1 million in expenses recognized in connection with the in-license of ASP2397 in March 2015.

Manufacturing and Production Expenses. Manufacturing and production expenses decreased $1.2 million, or 23.6%, to $4.1 million for the six months ended June 30, 2016, from $5.3 million for the six months ended June 30, 2015. This decrease was primarily due to a net increase in deferred contract costs capitalized during the six months ended June 30, 2016 related to materials manufactured under our supply agreement with Astellas.

General and Administrative Expenses. General and administrative expenses decreased $0.7 million, or 14.8%, to $3.7 million for the six months ended June 30, 2016, from $4.4 million for the six months ended June 30, 2015. This decrease was primarily due to a decrease in employee stock based compensation and legal fees related to the securities class action litigation that was concluded in 2015.

Investment and Other Income, Net. Investment and other income, net, increased $87,000 to $153,000 for the six months ended June 30, 2016, from $66,000 for the six months ended June 30, 2015.

Liquidity and Capital Resources

Since our inception, we have financed our operations primarily through private placements and public offerings of equity securities, and revenues from our operations. Cash, cash equivalents, marketable securities, and long-term investments, including restricted cash, totaled $38.5 million at June 30, 2016, compared with $42.0 million at December 31, 2015. The decrease in our cash, cash equivalents and marketable securities for the six months ended June 30, 2016, was primarily the result of the use of cash to fund our operations.

Net cash used in operating activities was $3.4 million and $5.3 million for the six months ended June 30, 2016 and 2015, respectively. The decrease in net cash used in operating activities for the six months ended June 30, 2016, compared with the prior year period, was primarily the result of a decrease in our net loss combined with a decrease in payments for accrued employee compensation and other accounts payable.

Net cash (used in) provided by investing activities was $(4.8) million and $4.5 million for the six months ended June 30, 2016 and 2015, respectively. The increase in net cash used by investing activities for the six months ended June 30, 2016, compared with the prior year period, was primarily the result of an increase in purchases of marketable securities.

Net cash used in financing activities was $5,000 and $18,000 for the six months ended June 30, 2016 and 2015, respectively. The decrease in net cash used in financing activities for the six months ended June 30, 2016, compared with the prior year period, was primarily the result of a decrease in the payment of withholding taxes for the net settlement of restricted stock units.

A discussion of our exposure to auction rate securities is included in Part 1, Item 3 of this Report under the heading "Quantitative and Qualitative Disclosures About Market Risk."

In the long-term, we expect to incur substantial additional research and development expenses, manufacturing and production expenses, and general and administrative expenses, including increases in costs related to personnel, preclinical and clinical testing, outside services, facilities, intellectual property and possible commercialization. Our future capital requirements will depend on many factors, including continued scientific progress in our research and development programs, the scope and results of preclinical testing and clinical trials, the time and costs involved in obtaining regulatory approvals, the costs involved in filing, prosecuting, enforcing and defending patent claims, the impact of competing technological and market developments, the cost of manufacturing scale-up and validation, and possible commercialization activities and arrangements. We may seek additional funding through research and development relationships with suitable potential corporate collaborators. We may also seek additional funding through public or private financings. For example, in August 2016, we sold 1,841,420 shares of our common stock to AnGes in a private placement. The shares were sold at a price of $4.24 per share, the 90-day volume weighted average price of the Company's common stock. Gross proceeds totaled approximately $7.8 million. We currently have on file an effective shelf registration statement that allows us to raise up to $100.0 million from the sale of common stock, preferred stock, debt securities and/or warrants. However, additional financing may not be available on favorable terms or at all. If additional financing is not available, we anticipate that our available cash and existing sources of funding will be adequate to satisfy our cash needs at least through December 31, 2018.

Contractual Obligations

Under our pre-existing license agreements, we are required to make certain payments to the City of Hope and CytRx in connection with the development and commercialization of our products licensed by Astellas. In addition, certain technology license agreements require us to make other payments if we or our sublicensees advance products through clinical development. For programs developed with the support of U.S. government funding, the U.S. government may have rights to resulting products without payment of royalties to us.

We may be required to make future payments to our licensors based on the achievement of milestones set forth in various in-licensing agreements, including our in-license agreement with Astellas related to VL-2397. In most cases, these milestone payments are based on the achievement of development or regulatory milestones, including the exercise of options to obtain licenses related to specific disease targets, commencement of various phases of clinical trials, filing of product license applications, approval of product licenses from the FDA or a foreign regulatory agency, and the first commercial sale of a related product. Payment for the achievement of milestones under our in-license agreements is highly speculative and subject to a number of contingencies.

The aggregate amount of additional milestone payments that we could be required to pay under our active in-license agreements in place at June 30, 2016, is approximately $106.1 million. These amounts assume that all remaining milestones associated with the milestone payments are met. In the event that product license approval for any of the related products is obtained, we may be required to make royalty payments in addition to these milestone payments. Although we believe that some of the milestones contained in our in-license agreements may be achieved, it is highly unlikely that a significant number of them will be achieved. Because the milestones are contingent, we are not in a position to reasonably estimate how much, if any, of the potential milestone payments will ultimately be paid, or when. Additionally, under the in-license agreements, many of the milestone events are related to progress in clinical trials which will take several years to achieve.

In addition, we have undertaken certain commitments under license agreements with collaborators, and under indemnification agreements with our officers and directors. Under the license agreements with our collaborators, we have agreed to continue to maintain and defend the patent rights licensed to the collaborators and, in the case of our agreements with Astellas, have agreed to undertake certain development and manufacturing activities. Under the indemnification agreements with our officers and directors, we have agreed to indemnify those individuals for any expenses and liabilities in the event of a threatened, pending or actual investigation, lawsuit, or criminal or investigative proceeding.

We have employment agreements that contain severance arrangements with our chief executive officer, or CEO, and our three other executives. Under the agreement with our CEO, we are obligated to pay severance if we terminate the CEO's employment without "cause," or if the CEO resigns for "good reason," as defined in the agreement, within the periods set forth therein. The severance for the CEO consists of continued base salary payments at the then-current rate, including the payment of health insurance premiums for 18 months, plus a payment equal to one and one-half times the CEO's cash bonus in the previous year. In addition, the CEO receives accelerated vesting on all his unvested stock awards as if he had remained employed by us for 18 months from the date of termination. In the event that the termination occurs within 24 months of a "change in control," as defined in the agreement, the severance for the CEO consists of a lump sum payment equal to 24 months of base salary at the then-current rate, the payment of health insurance premiums for 18 months, plus a payment equal to one and one-half times the CEO's cash bonus in the previous year. In addition, all outstanding unvested stock awards will vest immediately. Under the agreements with our other three executives, we are obligated to pay severance if we terminate the executive's employment without "cause," or if the executive resigns for "good reason," as defined in the agreements, within the periods set forth therein. The severance for the other executives consists of a lump-sum payment equal to 12 months of base salary at the then-current rate, including the payment of health insurance premiums for 12 months, plus a payment equal to the executive's cash bonus in the previous year. In addition, the executive receives accelerated vesting on all his unvested stock awards as if he had remained employed by us for 12 months from the date of termination. In the event that the termination occurs within 12 months of a "change in control," as defined in the agreements, the severance for the other executives consists of a lump sum payment equal to 18 months of base salary at the then-current rate, the payment of health insurance premiums for 12 months, plus a payment equal to the executive's cash bonus in the previous year. In addition, all outstanding unvested stock awards will vest immediately. The maximum payments due under these employment agreements would have been $3.1 million if each such officer was terminated at June 30, 2016.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are subject to interest rate risk. Our investment portfolio is maintained in accordance with our investment policy which defines allowable investments, specifies credit quality standards and limits the credit exposure of any single issuer. Our investment portfolio consists of cash equivalents, both restricted and non-restricted, marketable securities and long-term investments. The average maturity of our investments, excluding our auction rate securities, is approximately five months. Our investments are classified as available-for-sale securities.

To assess our interest rate risk, we performed a sensitivity analysis projecting an ending fair value of our cash equivalents and current marketable securities using the following assumptions: a three month average maturity and a 150-basis-point increase in interest rates. This pro forma fair value would have been $0.2 million lower than the reported fair value of our investments at June 30, 2016.

Our investment securities consist of auction rate securities, corporate debt securities and government agency securities. As of June 30, 2016, our long-term investments included a (at par value) $2.5 million auction rate security secured by municipal bonds. At June 30, 2016, the auction rate security we held maintained a Standard and Poor's credit rating of A-. The auction rate security is a debt instrument with a long-term maturity and with an interest rate that is reset in short intervals through auctions. The conditions in the global credit markets have prevented some investors from liquidating their holdings of auction rate securities because the amount of securities submitted for sale has exceeded the amount of purchase orders for such securities. If there is insufficient demand for the securities at the time of an auction, the auction may not be completed and the interest rates may be reset to predetermined higher rates. When auctions for these securities fail, the investments may not be readily convertible to cash until a future auction of these investments is successful or they are redeemed or mature.

Since February 2008, there has been insufficient demand at auction for our auction rate security held at June 30, 2016. As a result, this security is currently not liquid, and we could be required to hold it until it is redeemed by the issuer or to maturity. As of June 30, 2016, we had recognized $0.4 million of losses related to the auction rate security by adjusting its carrying value. The market value of the security has partially recovered from the lows that created the losses. As of June 30, 2016, we had recorded cumulative unrealized gains of $0.4 million. Any future decline in market value may result in additional losses being recognized.

The valuation of our auction rate security is subject to uncertainties that are difficult to predict. The fair value of the security is estimated utilizing a discounted cash flow analysis or other type of valuation model as of June 30, 2016. The key drivers of the valuation model include the expected term, collateralization underlying the security investment, the creditworthiness of the counterparty, the timing of expected future cash flows, discount rates, and the expected holding period. This security was also compared, when possible, to other observable market data for securities with similar characteristics.

In the event we need to access the funds that are not currently liquid, we will not be able to do so without the possible loss of principal, until a future auction for these investments is successful or they are redeemed by the issuer or they mature. If we are unable to sell these securities in the market or they are not redeemed, then we may be required to hold them until 2038 when they mature. We do not anticipate a need to access these funds for operational purposes for the foreseeable future. We will continue to monitor and evaluate these investments on an ongoing basis for impairment. Based on our ability to access our cash and other short-term investments, our expected operating cash flows, and our other sources of cash, we do not anticipate that the potential illiquidity of these investments will affect our ability to execute our current business plan.

ITEM 4. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive and financial officer, we conducted an evaluation of the design and operation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) promulgated under the Exchange Act as of the end of the period covered by this Report. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective and were operating at a reasonable assurance level as of June 30, 2016.

Changes in Internal Control over Financial Reporting

Management has determined that there were no significant changes in our internal control over financial reporting that occurred during the three months ended June 30, 2016, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1A. RISK FACTORS

You should consider carefully the risks described below, together with all of the other information included in this Report, and in our other filings with the SEC, before deciding whether to invest in or continue to hold our common stock. The risks described below are all material risks currently known, expected or reasonably foreseeable by us. If any of these risks actually occur, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

The risk factors set forth below with an asterisk (*) next to the title are new risk factors or risk factors containing changes, including any material changes, from the risk factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC.

(*)None of our independently developed product candidates has been approved for sale, and we have a limited number of independently developed product candidates in clinical trials. If we do not develop commercially successful products, we may be forced to curtail or cease operations.

All of our independently developed product candidates are either in research or development. We must conduct a substantial amount of additional research and development before any U.S. or foreign regulatory authority will approve any of our product candidates. Limited data exist regarding the efficacy of DNA vaccines or therapeutics compared with conventional vaccines or therapeutics. Results of our research and development activities may indicate that our product candidates are unsafe or ineffective. In this case, we may stop development and regulatory authorities will not approve them. For example, in 2013 we ceased development of Allovectin®, an investigational intratumoral cancer immunotherapy, following negative results from a Phase 3 trial.

We have completed a Phase 1/2 clinical study of our therapeutic genital herpes vaccine, designed to reduce viral shedding and genital herpes lesions in HSV-2 infected patients. The randomized, double-blind, placebo trial enrolled patients across seven U.S. sites and evaluated a monovalent (gD) vaccine and a bivalent (gD + UL46) vaccine. In June 2015, we announced top-line results from the trial. Neither the monovalent nor bivalent vaccine met the primary endpoint (reduction of viral shedding from baseline). The trial was completed in February 2016 and all patients were followed for safety for 12 months and efficacy for nine months after their final vaccine dose. The bivalent vaccine continued to achieve statistically significant reductions in the clinically meaningful secondary endpoint of genital lesion rate when compared to the pre-vaccination period at the 9-month time point after the patient's final dose. Neither the placebo nor the monovalent vaccine groups achieved statistical significance on this endpoint at nine months after vaccination. Furthermore, at the 9-month time point, the bivalent vaccine showed a favorable trend in recurrence rate, time to first recurrence, and proportion of patients who are recurrence-free. The bivalent vaccine elicited significant increases in antigen-specific interferon gamma producing T cells, indicating biologic activity. The FDA is currently reviewing our Phase 2 trial design that is intended to evaluate the efficacy of the bivalent vaccine using clinically relevant endpoints rather than virologic endpoints. We plan to initiate a Phase 2 trial of the bivalent vaccine during the second half of 2016.

In March 2016, we initiated a Phase 1 clinical trial of our novel antifungal, VL-2397. The Phase 1 clinical trial and any future trials, if any, may not demonstrate sufficient safety or efficacy to support further product development. Because we have a limited number of independent clinical-stage product candidates, if we experience a significant delay, set-back or failure in the development of any of our product candidates, it could have a material adverse impact on our business prospects.

All of our product candidates we are developing independently will require significant costs to advance through the development stages. If such product candidates are advanced through clinical trials, the results of such trials may not support approval by the FDA or comparable foreign agencies. Even if approved, our products may not be commercially successful, particularly if they do not gain market acceptance among physicians, patients, healthcare payers and relevant medical communities. If we fail to develop and commercialize our product candidates, we may be forced to curtail or cease operations.

(*)Our clinical trials or those of our partners may fail to demonstrate adequately the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show

the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. We and our licensees have in the past suffered significant setbacks in advanced clinical trials due to lack of efficacy, notwithstanding promising results in earlier trials. For example, in 2013 we ceased development of Allovectin®, an investigational intratumoral cancer immunotherapy, following negative results from a Phase 3 trial. In June 2015, we announced that our HSV-2 product candidates did not meet the primary endpoint in a Phase 1/2 clinical study. Most product candidates that commence clinical trials are never approved as products.

There are a number of factors that could cause a clinical study to fail or be delayed, including:

- the clinical study may produce negative or inconclusive results;
- regulators, monitoring boards or other entities may require that we hold, suspend or terminate clinical research for safety, ethical or regulatory reasons, including adverse events reported during the trial;
- we may decide, or regulators may require us, to conduct additional preclinical testing or clinical studies;
- enrollment in our clinical studies may be slower than we anticipate;
- the cost of our clinical studies may be greater than we anticipate; and
- the supply or quality of our product candidates or other materials necessary to conduct our clinical studies may be insufficient, inadequate or delayed.

In addition, even if clinical trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as sufficient to demonstrate that a product is safe and efficacious, and more trials could be required before we submit our product candidates for approval. To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

We are dependent on our out-license agreements with Astellas to further develop and commercialize ASP0113. The failure to maintain these agreements, or the failure of Astellas to perform its obligations under these agreements, could negatively impact our business.

Pursuant to the terms of our out-license agreements with Astellas, we granted to Astellas exclusive worldwide rights to develop and commercialize certain products, including ASP0113 but excluding CyMVectin™, for the control and prevention of CMV infection in immunocompromised patients, including transplant recipients and transplant donors, and pursuant to the terms of our supply and services agreement with Astellas, we are obligated to perform certain development activities and supply Astellas with its product requirements for development and initial commercialization activities. Consequently, our ability to generate any revenues from ASP0113 depends on Astellas' ability to develop, obtain regulatory approvals for and successfully commercialize ASP0113. We have limited control over the amount and timing of resources that Astellas will dedicate to these efforts.

We are subject to a number of other risks associated with our dependence on our out-license agreements with Astellas, including:

- Astellas may not comply with applicable regulatory guidelines with respect to developing or commercializing ASP0113, which could adversely impact sales or future development of ASP0113;
- We and Astellas could disagree as to future development plans and Astellas may delay, fail to commence or stop future clinical trials or other development;
- There may be disputes between us and Astellas, including disagreements regarding the license agreements, that may result in (1) the delay of or failure to achieve developmental, regulatory and commercial objectives that would result in milestone or royalty payments, (2) the delay or termination of any future development or commercialization of ASP0113, and/or (3) costly litigation or arbitration that diverts our management's attention and resources;
- Astellas may not provide us with timely and accurate information regarding development, sales and marketing activities or supply forecasts, which could adversely impact our ability to comply with our service and supply obligations to Astellas and manage our own inventory of ASP0113, as well as our ability to generate accurate financial forecasts;
- Business combinations or significant changes in Astellas' business strategy may adversely affect Astellas' ability or willingness to perform its obligations under our license agreements;

- Astellas may not properly defend our intellectual property rights, or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential litigation;
- The royalties we are eligible to receive from Astellas may be reduced based upon Astellas' and our ability to maintain or defend our intellectual property rights and the presence of generic competitors;
- Limitations on our or an acquirer's ability to maintain or pursue development or commercialization of products that are competitive with ASP0113 could deter a potential acquisition of us that our stockholders may otherwise view as beneficial; and
- If Astellas is unsuccessful in developing, obtaining regulatory approvals for or commercializing ASP0113, we may not receive any additional milestone or royalty payments under the license agreements and our business prospects and financial results may be materially harmed.

The out-license agreements and supply and services agreement are subject to early termination, including through Astellas' right to terminate upon advance notice to us if Astellas reasonably determines that further development and/or commercialization will not be beneficial for Astellas. If the agreements are terminated early, we may not be able to find another collaborator for the commercialization and further development of ASP0113 on acceptable terms, or at all, and we may be unable to pursue continued development or commercialization of ASP0113 on our own.

Our revenues partially depend on the development and commercialization of products in collaboration with others to whom we have licensed our technologies. If our other collaborators or licensees do not successfully develop and commercialize products covered by these arrangements, or if we are unable to find collaborators or licensees in the future, we may not be able to derive revenues from these arrangements, we may lose opportunities to validate our DNA delivery technologies, or we may be forced to curtail our development and commercialization efforts in these areas.

In addition to our out-license agreements with Astellas, we have licensed, and may continue to license, our technologies to corporate collaborators and licensees for the research, development and commercialization of specified product candidates. Our revenues partially depend upon the ability of these collaborators and licensees to successfully develop and commercialize products covered by these arrangements. In addition, our licensee Astellas has product candidates in advanced stages of clinical development, for which we believe regulatory approval would provide important further validation of our DNA delivery technologies. The development and commercialization efforts of our collaborators and licensees are subject to the same risks and uncertainties described above with respect to our independently developed product candidates.

Some collaborators or licensees may not succeed in their product development efforts. It is possible that our collaborators or licensees may be unable to obtain regulatory approval of product candidates using our technologies or successfully market and commercialize any such products for which regulatory approval is obtained. Other collaborators or licensees may not devote sufficient time or resources to the programs covered by these arrangements, and we may have limited or no control over the time or resources allocated by these collaborators or licensees to these programs. The occurrence of any of these events may cause us to derive little or no revenue from these arrangements, lose opportunities to validate our DNA delivery technologies, or force us to curtail or cease our development and commercialization efforts in these areas.

Our collaborators and licensees may breach or terminate their agreements with us, including some that may terminate their agreements without cause at any time subject to certain prior written notice requirements, and we may be unsuccessful in entering into and maintaining other collaborative arrangements for the development and commercialization of products using our technologies. If we are unable to maintain existing collaboration arrangements or enter into new ones, our ability to generate licensing, milestone or royalty revenues would be materially impaired.

Some of our independent product candidates and some of those under development by our sublicensees incorporate technologies we have licensed from others. If we are unable to retain rights to use these technologies, we or our sublicensees may not be able to market products incorporating these technologies on a commercially feasible basis, if at all.

We have licensed certain technologies from corporate collaborators and research institutions, and sublicensed certain of such technologies to others, for use in the research, development and commercialization of product candidates. Our product development efforts and those of our sublicensees partially depend upon continued access to these technologies. For example, we or our licensors may breach or terminate our agreements, or disagree on interpretations of those agreements, which could prevent continued access to these technologies. If we were unable to resolve such matters on satisfactory terms, or at all, we or our sublicensees may be unable to develop and commercialize our products, and we may be forced to curtail or cease operations.

We licensed rights to patents and know-how for VL-2397 from Astellas pursuant to an in-license agreement that contains obligations to pay Astellas regulatory and sales milestone payments relating to VL-2397, as well as royalties on net sales of VL-2397. If we fail to make a required payment to Astellas or otherwise materially breach our in-license agreement with Astellas and do not cure the failure within the required time period, Astellas may be able to terminate the license to the VL-2397 patents and know-how, which would have a material adverse effect on our business, financial condition and results of operations.

(*)We have a history of net losses. We expect to continue to incur net losses and we may not achieve or maintain profitability.

To date, we have not sold, or received approval to sell, any pharmaceutical products. We do not expect to sell any pharmaceutical products for at least the next several years. Our net losses were approximately $9.2 million, $16.5 million and $31.2 million for the years ended December 31, 2015, 2014 and 2013, respectively. As of June 30, 2016, we had incurred cumulative net losses totaling approximately $408.6 million. Moreover, we expect that our net losses will continue and may increase for the foreseeable future. We may not be able to achieve projected results if we generate lower revenues or receive lower investment income than expected, or we incur greater expenses than expected, or all of the above. Currently our revenues are largely dependent on manufacturing and research services performed under our license agreement with Astellas. That revenue may decrease once the ASP0113 trials are complete or in the event that the development of the ASP0113 program ceases. We may never generate sufficient product revenue to become profitable. We also expect to have quarter-to-quarter fluctuations in revenues, expenses, and losses, some of which could be significant.

We may need additional capital in the future. If additional capital is not available, we may have to curtail or cease operations.

We may need to raise more money to continue the research and development necessary to bring our products to market and to establish marketing and additional manufacturing capabilities. We may seek additional funds through public and private stock offerings, government contracts and grants, arrangements with corporate collaborators, borrowings under lines of credit or other sources. We currently have on file a shelf registration statement that allows us to raise up to an aggregate of $100.0 million from the sale of common stock, preferred stock, debt securities and/or warrants. However, we may not be able to raise additional funds on favorable terms, or at all. Conditions in the credit markets and the financial services industry may make equity and debt financing more difficult to obtain, and may negatively impact our ability to complete financing transactions. To the extent that we raise additional funds by issuing equity securities, our stockholders may experience significant dilution. Any debt financing, if available, may involve restrictive covenants, such as limitations on our ability to incur additional indebtedness and other operating restrictions that could adversely impact our ability to conduct our business.

If we are unable to obtain additional funds, we may have to scale back our development of new products, reduce our workforce or license to others products or technologies that we otherwise would seek to commercialize ourselves. The amount of money we may need would depend on many factors, including:

- The progress of our research and development programs;
- The scope and results of our preclinical studies and clinical trials;
- The amount of our legal expenses and any settlement or damages payments associated with litigation; and
- The time and costs involved in: obtaining necessary regulatory approvals; filing, prosecuting and enforcing patent claims; scaling up our manufacturing capabilities; and the commercial arrangements we may establish.

The regulatory approval process is expensive, time consuming and uncertain, which may prevent us and our collaborators and licensees from obtaining required approvals for the commercialization of our products.

Our product candidates under development and those of our collaborators and licensees, including Astellas, are subject to extensive and rigorous regulations by numerous governmental authorities in the United States and other countries. The regulatory approval process takes many years and will require us to expend substantial resources.

U.S. or foreign regulations evolve and could prevent or delay regulatory approval of our products or limit our and our collaborators and licensees' ability to develop and commercialize our products. Delays could:

- Impose costly procedures on our activities and those of our collaborators and licensees;
- Delay or prevent our receipt of developmental or commercial milestones from our collaborators and licensees;

- Diminish any competitive advantages that we or our products attain; or
- Otherwise negatively affect our results of operations and cash flows.

We have no experience in filing a BLA or an NDA with the FDA. Because these applications must be submitted to and approved by the FDA before any of our product candidates may be commercialized, our lack of experience may impede our ability to obtain FDA approval in a timely manner, if at all, which in turn would delay or prevent us from commercializing those products. Similarly, our lack of experience with respect to obtaining regulatory approvals in countries other than the United States may impede our ability to commercialize our products in those countries.

The FDA and comparable foreign regulatory bodies will regulate separately each product containing a particular gene depending on its intended use. Presently, to commercialize any product we and our collaborators and licensees must file a regulatory application for each proposed use. We and our collaborators and licensees must conduct clinical studies to demonstrate the safety and efficacy of the product necessary to obtain FDA or foreign regulatory authority approval. The results obtained so far in our clinical trials and those of our collaborators and licensees may not be replicated in ongoing or future trials, or the results may be subject to varying interpretation on whether they are sufficient to support approval for commercialization. This may prevent any of our product candidates from receiving approval for commercial sale.

We anticipate that we would commercially manufacture any of our product candidates that are approved for marketing. Therefore, our manufacturing facilities will have to be approved by the FDA pursuant to inspections conducted after we submit an application for regulatory approval. If we cannot successfully manufacture material that conforms to applicable specifications and the strict regulatory requirements of the FDA, we will not be able to secure and/or maintain regulatory approval for our manufacturing facilities. If the FDA does not approve our facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, our ability to develop, obtain regulatory approval for or market our product candidates will be adversely affected.

If any of our product candidates receive regulatory approval, the FDA or other foreign regulatory agencies may still impose significant restrictions on the indicated uses or marketing of our product candidates or impose ongoing requirements for potentially costly post-approval studies. In addition, regulatory agencies subject a product, its manufacturer and the manufacturer's facilities to continual review and periodic inspections. If a regulatory agency discovers previously unknown problems with a product or a product class, including 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 or product class, our collaborators and licensees or us, including requiring withdrawal of a product from the market. Our product candidates will also be subject to ongoing FDA and other foreign regulatory agency requirements for the labeling, packaging, storage, advertising, promotion, record-keeping and submission of safety and other post-market information on the product. If we or our collaborators and licensees fail to maintain regulatory compliance after receiving marketing approval, we or our collaborators and licensees may be unable to market our products and our business could suffer.

Adverse events or the perception of adverse events in the field of gene therapy, or with respect to our product candidates, may negatively impact regulatory approval or public perception of our products.

The commercial success of some of our product candidates will depend in part on public acceptance of the use of gene therapy for preventing or treating human diseases. Serious adverse events, including patient deaths, have occurred in clinical trials utilizing viral delivery systems to deliver therapeutic genes to the patient's targeted cells. Although none of our current products or studies utilize viral delivery systems, these adverse events, as well as any other adverse events in the field of gene therapy that may occur in the future, may negatively influence public perception of gene therapy in general. If public perception is influenced by claims that gene therapy is unsafe, our product candidates may not be accepted by the general public or the medical community.

Future adverse events in gene therapy or the biotechnology industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approval of our potential products. Any increased scrutiny could delay or increase the costs of our product development efforts or clinical trials. In addition, any adverse events that may occur in our clinical trials and any resulting publicity may cause regulatory delays or otherwise affect our product development efforts or clinical trials.

Some of our potential products may be administered to patients who are suffering from, or are vulnerable to, serious diseases or other conditions which can themselves be life-threatening and often result in the death of the patient. Patient deaths in our clinical trials, even if caused by pre-existing diseases or conditions, could negatively affect the perception of our product candidates. In addition, although we do not believe our vaccine candidates could cause the diseases they are designed to protect against, a temporal relationship between vaccination and disease onset could be perceived as causal. Some of our products are designed to stimulate immune responses, and those responses, if particularly strong or uncontrolled, could result in local or systemic adverse events, including latent adverse events.

(*)Our patents and proprietary rights may not provide us with any benefit and the patents of others may prevent us from commercializing our products.

As of June 30, 2016, we were the assignee or co-assignee of 54 issued U.S. and foreign patents. We maintain our issued patents by paying maintenance fees to the patent office in each country when due. Where appropriate, we participate in legal proceedings to vigorously defend against the revocation or withdrawal of our patents. The scope and nature of these proceedings generally differ depending on the country in which they are initiated. If we are not successful in defending our patents, we may lose all or part of our proprietary rights related to those patents in these geographic regions.

As of June 30, 2016, we were also prosecuting 4 pending patent applications in the United States and in foreign countries that cover various aspects of our proprietary technologies, not including patent applications for which we are a co-assignee and that are being prosecuted by our partners.

We may not receive any patents from our current patent applications. Issued patents provide exclusivity for only a limited time period, after which they no longer serve to protect proprietary technologies or to provide any commercial advantage. Moreover, if patents are issued to us, governmental authorities may not allow claims sufficient to protect our technologies and products. Others may also challenge or seek to circumvent or invalidate our patents. In that event, the rights granted under our patents may be inadequate to protect our proprietary technologies or to provide any commercial advantage.

In addition, the Leahy-Smith America Invents Act, or AIA, was signed into law on September 16, 2011, and significantly changed certain aspects of the United States patent laws. These changes include, but are not limited to, authorizing fee setting authority to the United States Patent Office, transitioning the United States to a first-inventor-to-file patent system, expanding the scope of prior art that may be utilized against a pending patent application, and adding post-patent grant proceedings before the Patent Office in which third parties may challenge the validity of the granted patent. It is not clear, what, if any, impact the AIA will have on the cost of prosecuting our patent applications, our ability to obtain patents based on our patent applications, and our ability to enforce or defend our issued or granted United States patents. An inability to obtain, enforce, and defend patents covering our proprietary technologies would materially and adversely affect our business prospects and financial condition.

Some components of our gene-based product candidates are, or may become, patented by others. As a result, we may be required to obtain licenses to conduct research, to manufacture, or to market such products. Licenses may not be available on commercially reasonable terms, or at all, which may impede our ability to commercialize our products.

The legal proceedings to obtain and defend patents, and litigation of third-party claims of intellectual property infringement, could require us to spend money and could impair our operations.

Our and our collaborators', including Astellas', success will depend in part on our, or our collaborators', ability to obtain patent protection for our products and processes, both in the United States and in other countries. The patent positions of biotechnology and pharmaceutical companies, however, can be highly uncertain and involve complex legal and factual questions. Therefore, it is difficult to predict the breadth of claims allowed in the biotechnology and pharmaceutical fields.

We also rely on confidentiality agreements with our corporate collaborators, employees, consultants and certain contractors to protect our proprietary technologies. However, these agreements may be breached and we may not have adequate remedies for such breaches. In addition, our trade secrets may otherwise become known or independently discovered by our competitors.

Protecting intellectual property rights can be very expensive. Litigation may be necessary to enforce patents issued to us or to determine the scope and validity of third-party proprietary rights. If we or, as applicable, our commercialization partners, including Astellas pursuant to its first right to enforce patents licensed to it under our license agreements, choose to go to court to stop someone else from using our inventions, that individual or company has the right to ask the court to rule that the underlying patents are invalid and/or should not be enforced against that third party. Moreover, if a competitor were to file a patent application claiming technology also invented by us or our collaborators or licensees, we would have to participate in an interference proceeding before the U.S. Patent and Trademark Office to determine the priority of the invention. We or our collaborators or licensees may be drawn into interferences

with third parties or may have to provoke interferences ourselves to unblock third-party patent rights to allow us or our collaborators or licensees to commercialize products based on our technologies. Litigation could result in substantial costs and the diversion of management's efforts regardless of the results of the litigation. An unfavorable result in litigation could subject us to significant liabilities to third parties, require disputed rights to be licensed or require us to cease using some technologies.

Our products and processes may infringe, or be found to infringe, patents not owned or controlled by us. Patents held by others may require us to alter our products or processes, obtain licenses, or stop activities. If relevant claims of third-party patents are upheld as valid and enforceable, we or our collaborators or licensees could be prevented from practicing the subject matter claimed in the patents, or may be required to obtain licenses or redesign our products or processes to avoid infringement. In addition, we or our collaborators or licensees could be required to pay money damages. A number of genetic sequences or proteins encoded by genetic sequences that we are investigating are, or may become, patented by others. As a result, we or our collaborators or licensees may have to obtain licenses to test, use or market these products. Our business will suffer if we or our collaborators or licensees are not able to obtain licenses at all or on terms commercially reasonable to us or them and we or they are not able to redesign our products or processes to avoid infringement.

We have incurred costs in several legal proceedings involving our intellectual property rights in Europe, Japan and Canada. We may continue to incur costs to defend and prosecute patents and patent applications in these and other regions.

Competition and technological change may make our product candidates and technologies less attractive or obsolete.

We compete with companies, including major pharmaceutical and biotechnology firms that are pursuing other forms of treatment or prevention for diseases that we target. We also may experience competition from companies that have acquired or may acquire technologies from universities and other research institutions. As these companies develop their technologies, they may develop proprietary positions which may prevent us from successfully commercializing products.

Some of our competitors are established companies with greater financial and other resources than we have. Other companies may succeed in developing products and obtaining regulatory approval from the FDA or comparable foreign agencies faster than we do, or in developing products that are more effective than ours. Research and development by others may seek to render our technologies or products obsolete or noncompetitive or result in treatments or cures superior to any therapeutics developed by us.

The internet site ClinicalTrials.gov provides public access to information on clinical trials and their results for a wide range of diseases and conditions. Future disclosures of such confidential commercial information may result in loss of advantage of competitive secrets.

If we lose our key personnel or are unable to attract and retain additional personnel, we may not be able to achieve our business objectives.

We are highly dependent on our principal scientific, manufacturing, clinical, regulatory and management personnel, including Vijay B. Samant, our President and Chief Executive Officer. The loss of the services of these individuals might significantly delay or prevent the achievement of our objectives. We do not maintain "key person" life insurance on any of our personnel. We depend on our continued ability to attract, retain and motivate highly qualified management and scientific personnel. We face competition for qualified individuals from other companies, academic institutions, government entities and other organizations in attracting and retaining personnel. To pursue our product development plans, we may need to hire additional management personnel and additional scientific personnel to perform research and development, as well as additional personnel with expertise in clinical trials, government regulation and manufacturing. However, due to the reasons noted above, we may not be successful in hiring or retaining qualified personnel and therefore we may not be able to achieve our business objectives.

(*)We have limited experience in manufacturing our product candidates in commercial quantities. We may not be able to comply with applicable manufacturing regulations or produce sufficient product for contract or commercial purposes.

The commercial manufacturing of vaccines and other biological products is a time-consuming and complex process, which must be performed in compliance with the FDA's cGMP regulations. We may not be able to comply with the cGMP regulations, and we have in the past encountered and may in the future encounter delays, disruptions or quality control problems in our manufacturing process. In addition, we may need to complete the installation and validation of additional large-scale fermentation and related purification equipment to produce the quantities of product expected to be required for commercial purposes. We have limited experience in manufacturing at this scale. We will also depend on third parties for any commercial scale filling of product vials. Moreover, our manufacturing processes may be disrupted if we do not extend the lease for our existing facility or find adequate replacement space with sufficient time in advance of the expiration of our current lease term in December 2018. Noncompliance with the cGMP regulations, the inability to complete the installation or validation of additional large-scale equipment, the inability to

secure adequate space to conduct our manufacturing activities or other problems with our manufacturing process may limit or delay the development or commercialization of our product candidates, and cause us to breach our contract manufacturing service arrangements or our obligations under our agreements with collaborators, including our obligations under our supply and services agreement with Astellas.

We currently depend on third parties to conduct our clinical trials and may initially depend on third parties to manufacture our product candidates commercially.

We rely on third parties, including clinical research organizations, medical institutions and contract laboratories, to perform critical services for us in connection with our clinical trials. These third parties are responsible for many aspects of the trials, including finding and enrolling subjects for testing and administering the trials. Although we rely on these third parties to conduct our clinical trials, we are responsible for ensuring that each of our clinical trials is conducted in accordance with its protocol and applicable regulations, including good clinical practices established by the FDA and foreign regulatory authorities, which govern the conduct, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that trial subjects are adequately informed of the potential risks associated with participating in clinical trials. Our reliance on third parties does not relieve us of the responsibility to ensure these requirements are met. These third parties may not comply with all regulatory and contractual requirements or may not otherwise perform their services in a timely or acceptable manner, and we may need to enter into new arrangements with alternative third parties and our clinical trials may be extended, delayed or terminated. In addition, if such third parties fail to perform their obligations in compliance with our clinical trial protocols or applicable good clinical practice regulations, our clinical trials may not meet regulatory requirements or may need to be repeated, and we may not be able to obtain regulatory approval for or commercialize the product candidate being tested in such trials. These risks also apply to the development activities of our collaborators and licensees, and we do not control our collaborators' and licensees' research and development, clinical trials or regulatory activities.

We may also initially depend on collaborators, licensees or other third parties to manufacture our product candidates in commercial quantities. There are a limited number of third parties that could manufacture our product candidates. We may be unable to enter into any arrangement for the commercial manufacture of our product candidates, and any arrangement we secure may not meet our requirements for manufacturing quality or quantity. Our dependence on third parties for the commercial manufacture of our product candidates may also reduce our profit margins and our ability to develop and deliver products in a timely manner.

We have no marketing or sales experience, and if we are unable to develop our own sales and marketing capability, we may not be successful in commercializing our products.

Our current strategy is to market our proprietary products directly in the United States, but we currently do not possess pharmaceutical marketing or sales capabilities. To market and sell our proprietary products, we will need to develop a sales force and a marketing group with relevant pharmaceutical industry experience, or make appropriate arrangements with strategic partners to market and sell these products. Developing a marketing and sales force is expensive and time-consuming and could delay any product launch. If we are unable to successfully employ qualified marketing and sales personnel or develop other sales and marketing capabilities, we may not be able to generate sufficient product revenue to become profitable.

Healthcare reform and restrictions on reimbursement may limit our returns on potential products.

Our ability to earn sufficient returns on our products will depend in part on how much, if any, reimbursement for our products and related treatments will be available from:

- Government health administration authorities;
- Government agencies procuring biodefense products for military or public use, including some for which we may become a sole-source vendor;
- Private health coverage insurers;
- Managed care organizations; and
- Other organizations.

If we fail to obtain appropriate reimbursement, we could be prevented from successfully commercializing our potential products. There are ongoing efforts by governmental and third-party payers to contain or reduce the costs of healthcare through various reform measures. In the United States, the Federal government passed comprehensive healthcare reform legislation in 2010. Many of the details regarding the implementation of this legislation are yet to be determined and we currently cannot predict whether or to what extent such implementation or adoption of reforms may impair our business.

Additionally, third-party payers are increasingly challenging the price of medical products and services. If purchasers or users of our products are not able to obtain adequate reimbursement for the cost of using our products, they may forego or reduce their use. Significant uncertainty exists as to the reimbursement status of newly approved healthcare products, and whether adequate third-party coverage will be available.

We use hazardous materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development processes involve the controlled storage, use and disposal of hazardous materials and biological materials. Our hazardous materials include certain compressed gases, flammable liquids, acids and bases, and other toxic compounds. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, the risk of accidental contamination or injury from hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result. We could incur significant costs to comply with current or future environmental laws and regulations.

We may have significant product liability exposure.

We face an inherent business risk of exposure to product liability and other claims in the event that our technologies or products are alleged to have caused harm. We also have potential liability for products manufactured by us on a contract basis for third parties. Although we currently maintain product liability insurance in the amount of $10 million in the aggregate plus additional coverage specific to the foreign countries where our clinical trials are being conducted, this insurance coverage may not be sufficient, and we may not be able to obtain sufficient coverage in the future at a reasonable cost. Our inability to obtain product liability insurance at an acceptable cost or to otherwise protect against potential product liability claims could prevent or inhibit the commercialization of any products developed by us or our collaborators, or our ability to manufacture products for third parties. If we are sued for any injury caused by our technologies or products, or by third-party products that we manufacture, our liability could exceed our insurance coverage and total assets.

(*)Negative conditions in the global credit markets may impair the liquidity of a portion of our investment portfolio.

Our investment securities consist of auction rate securities, corporate debt securities and government agency securities. As of June 30, 2016, our long-term investments included a (at par value) $2.5 million auction rate security secured by municipal bonds. At June 30, 2016, the auction rate security we held maintained a Standard and Poor's credit rating of A-. Our auction rate security is a debt instrument with a long-term maturity and with an interest rate that is reset in short intervals through auctions. The conditions in the global credit markets have prevented some investors from liquidating their holdings of auction rate securities because the amount of securities submitted for sale has exceeded the amount of purchase orders for such securities. If there is insufficient demand for the securities at the time of an auction, the auction may not be completed and the interest rates may be reset to predetermined higher rates. When auctions for these securities fail, the investments may not be readily convertible to cash until a future auction of these investments is successful or they are redeemed or mature.

Since February 2008, there has been insufficient demand at auction for our auction rate security held at June 30, 2016. As a result, this security is currently not liquid, and we could be required to hold it until it is redeemed by the issuer or to maturity. As of June 30, 2016, we had recognized $0.4 million of losses related to the auction rate security. The market value of the security has partially recovered from the lows that created the losses. As of June 30, 2016, we had recorded cumulative unrealized gains of $0.4 million. Any future decline in market value may result in additional losses being recognized.

In the event we need to access the funds that are in an illiquid state, we will not be able to do so without the possible loss of principal, until a future auction for this investment is successful or it is redeemed by the issuer or it matures. If we are unable to sell this security in the market or it is not redeemed, then we may be required to hold it to maturity.

(*)Our stock price could continue to be highly volatile and you may not be able to resell your shares at or above the price you pay for them.

The market price of our common stock, like that of many other life sciences companies, has been and is likely to continue to be highly volatile. From January 1, 2013, to June 30, 2016, our stock price has ranged from $2.81 to $45.10. The following factors, among others, could have a significant impact on the market price of our common stock:

- The results of our preclinical studies and clinical trials or announcements regarding our plans for future studies or trials, or those of our collaborators, licensees or competitors;
- Evidence or lack of evidence of the safety or efficacy of our potential products or those of our collaborators, licensees or competitors;
- The success of our collaborators and licensees, including Astellas, in the development or commercialization of our product candidates;
- The announcement by us or our collaborators, licensees or competitors of technological innovations or new products;
- Developments concerning our patent or other proprietary rights or those of our collaborators, licensees or competitors, including litigation and challenges to our proprietary rights;
- Other developments with our collaborators or licensees, including our entry into new collaborative or licensing arrangements;
- Geopolitical developments, natural or man-made disease threats, or other events beyond our control;
- U.S. and foreign governmental regulatory actions;
- Changes or announcements in reimbursement policies;
- Period-to-period fluctuations in our operating results;
- Market conditions for life science stocks in general;
- Changes in the collective short interest in our stock;
- Changes in estimates of our performance by securities analysts; and
- Our cash balances, need for additional capital, and access to capital.

We are at risk of future securities class action litigation due to our past and expected stock price volatility.

In the past, stockholders have brought securities class action litigation against a company following a decline in the market price of its securities. This risk is especially acute for us because life science companies have experienced greater than average stock price volatility in recent years and, as a result, have been subject to, on average, a greater number of securities class action claims than companies in other industries. Even if such claims are not successful, any litigation could result in substantial costs and divert our management's attention and resources, which could have a material adverse effect on our business, operating results or financial condition.

(*)Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Our certificate of incorporation and bylaws include anti-takeover provisions, such as a classified board of directors, a prohibition on stockholder actions by written consent, the authority of our board of directors to issue preferred stock without stockholder approval, and supermajority voting requirements for specified actions. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years. These provisions may delay or prevent an acquisition of us, even if the acquisition may be considered beneficial by some stockholders. In addition, they may discourage or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

In addition, we recently completed a private placement of common stock to AnGes, immediately following which AnGes owned approximately 18.6% of our outstanding shares. In connection with the private placement, AnGes agreed to vote all of its shares in

accordance with the recommendations of our board of directors on any matter brought beforeour stockholders for a vote, subject to certain limitations. This voting provision may also discourage or prevent attempts by other stockholders to replace members of our board of directors or engaging in acquisition activities that our board of directors does not determine to be in the best interests of our stockholders.

The issuance of preferred stock could adversely affect our common stockholders.

We currently have on file a shelf registration statement that allows us to raise up to an aggregate of $100.0 million from the sale of common stock, preferred stock, debt securities and/or warrants and our restated certificate of incorporation authorizes us to issue up to 5,000,000 shares of preferred stock. The issuance of preferred stock could adversely affect the voting power of holders of our common stock, and reduce the likelihood that our common stockholders will receive dividend payments and payments upon liquidation. The issuance of preferred stock could also decrease the market price of our common stock, or have terms and conditions that could discourage a takeover or other transaction that might involve a premium price for our shares or that our stockholders might believe to be in their best interests.

ITEM 6. EXHIBITS

Exhibit Number	Description of Document
3.1(i)(1)	Restated Certificate of Incorporation.
3.2(ii)(2)	Amended and Restated Bylaws.
3.3(i)(3)	Certificate of Amendment to Restated Certificate of Incorporation.
3.4(i)(4)	Certificate of Amendment to Restated Certificate of Incorporation.
3.5(i)(5)	Certificate of Amendment to Restated Certificate of Incorporation.
4.1(1)	Specimen Common Stock Certificate.
10.1	First Amendment dated July 15, 2016, to Lease dated January 30, 2002, between the Company and Kilroy Realty, L.P., a Delaware Limited Partnership.
10.2	Stock Purchase Agreement dated August 1, 2016, between the Company and AnGes MG, Inc.
31.1	Certification of Vijay B. Samant, Chief Executive Officer and acting Chief Financial Officer, pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Vijay B. Samant, Chief Executive Officer and acting 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.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

(1) Incorporated by reference to the exhibit of the same number filed with the Company's Registration Statement on Form S-3 (No. 33-95812) filed on August 15, 1995.
(2) Incorporated by reference to the exhibit of the same number filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.
(3) Incorporated by reference to the exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 25, 2016.
(4) Incorporated by reference to the exhibit 3.3(i) filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.
(5) Incorporated by reference to the exhibit 4.2 filed with the Company's Registration Statement on Form S-8 (No. 333-135266) filed on June 23, 2006.

SIGNATURE

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.

Vical Incorporated

Date: August 9, 2016

By: /s/ ANTHONY A. RAMOS
Anthony A. Ramos
VP Finance, Chief Accounting Officer (on behalf of the registrant and as the registrant's Principal Accounting Officer)

Exhibit 10.1

FIRST AMENDMENT TO LEASE

This FIRST AMENDMENT TO LEASE ("**First Amendment**") is made and entered into as of July 15, 2016, by and between KILROY REALTY, L.P., a Delaware limited partnership ("**Landlord**"), and VICAL INCORPORATED, a Delaware corporation ("**Tenant**").

R E C I T A L S :

A. Landlord and Tenant are parties to that certain Lease dated as of January 30, 2002 (the "**Lease**"), pursuant to which Tenant leases all of the 68,400 rentable square feet of space (the "**Premises**") of the building (the "**Building**") located at 10390 Pacific Center Court, San Diego, California, the principle component of the single-building project known as the "Pacific Corporate Center Lot 25/27 Project."

B. The parties desire to amend the Lease on the terms and conditions set forth in this First Amendment.

A G R E E M E N T :

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. **Terms**. All capitalized terms when used herein shall have the same respective meanings as are given such terms in the Lease unless expressly provided otherwise in this First Amendment.

2. **Condition of the Premises**. Landlord and Tenant acknowledge that Tenant has been occupying the Premises pursuant to the Lease, and therefore Tenant continues to accept the Premises in its presently existing, "as is" condition. Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises.

3. **Extended Lease Term**. Pursuant to the Lease, the Lease Term is scheduled to expire on August 31, 2017. Landlord and Tenant hereby agree to extend the Lease Term for a period of sixteen (16) months, from September 1, 2017, through December 31, 2018 (the "**Extended Term**"), on the terms and conditions set forth in the Lease, as hereby amended by this First Amendment, unless sooner terminated as provided in the Lease.

3.1 **Option to Extend Lease Term**. Landlord and Tenant acknowledge and agree that the Extended Term provided herein shall be deemed not to represent any of Tenant's three (3) options to extend the Lease Term as provided in Section 2.2 of the Lease. Accordingly, Landlord and Tenant acknowledge and agree that Tenant shall continue to have the three (3) options to extend the Lease Term, each for a period of five (5) years, in accordance with, and pursuant to the terms of, Section 2.2 of the Lease. For purposes of clarity, the parties hereby acknowledge and agree that, in connection any exercise by Tenant of the first such Option Term in accordance with Section 2.2 of the Lease, Tenant shall deliver the Exercise Notice to Landlord during the period (the "**First Option Exercise Window**") commencing on October 1, 2017 and ending on March 31, 2018.

4. **Rent**.

4.1 **Base Rent**. Prior to September 1, 2017, Tenant shall continue to pay monthly installments of Base Rent for the Premises in accordance with the terms of the Lease. During the Extended Term, Tenant shall pay monthly installments of Base Rent for the Premises as follows:

Extended Term	*Annualized* Base Rent	Monthly Installment of Base Rent	Monthly Rental Rate per Square Foot
September 1, 2017 *through* December 31, 2018	$2,487,024.00	$207,252.00	$3.03

4.2 **Abated Base Rent**. Provided that Tenant is not then in default of the Lease (as hereby amended), then during the two (2)-month period commencing on October 1, 2018 and ending on November 30, 2018 (the "**Rent Abatement Period**"), Tenant shall not be obligated to pay any Base Rent otherwise attributable to the Premises during such Rent Abatement Period (the "**Rent Abatement**"). Landlord and Tenant acknowledge that the aggregate amount of the Rent Abatement equals $414,504.00 (*i.e.*, $207,252.00 per month). Tenant acknowledges and agrees that the foregoing Rent Abatement has been granted to Tenant as additional consideration for entering into this First Amendment, and for agreeing to pay the Rent and perform the terms and conditions otherwise required under the Lease (as hereby amended). If Tenant shall be in default under the Lease (as hereby amended) and shall fail to cure such default within the notice and cure period, if any, permitted for cure pursuant to the Lease (as hereby amended), or if the Lease (as hereby amended) is terminated for any reason, other than as the result of casualty or condemnation, then Landlord may at its option, by notice to Tenant, elect, in addition to any other remedies Landlord may have under the Lease (as hereby amended), the following remedy: that Tenant shall immediately become obligated to pay to Landlord all Base Rent abated hereunder during the Rent Abatement Period, with interest as provided pursuant to the Lease from the date such Base Rent would have otherwise been due but for the abatement provided herein.

4.3 **Direct Expenses**. Prior to and throughout the Extended Term, Tenant shall continue to be obligated to pay Tenant's Share of the annual Direct Expenses in accordance with the terms of the Lease.

4.4 **Certain Tax Expenses**. Landlord and Tenant hereby acknowledge and agree that, while Section 4.6 of the Lease applied throughout the initial Lease Term (i.e., prior to September 1, 2017), and shall continue to apply to the extent the Lease is hereafter extended in accordance with Section 2.2 of the Lease, the terms and conditions of Section 4.6 shall not apply during the Extended Term.

5. **Broker**. Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this First Amendment other than Hughes Marino (the "**Broker**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this First Amendment. Landlord shall pay Broker a commission in connection with the Extended Term and this First Amendment pursuant to the terms of a separate commission agreement. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Broker, occurring by, through, or under the indemnifying party. The terms of this Section 5 shall survive the expiration or earlier termination of the term of the Lease, as hereby amended.

6. **Security Deposit**. Landlord and Tenant acknowledge that, in accordance with Section 21.1 of the Lease, Tenant has previously delivered the sum of One Hundred Thousand Ninety-One Thousand Five Hundred Twenty and No/100 Dollars ($191,520.00) (the "**Existing Security Deposit**") to Landlord as security for the faithful performance by Tenant of the terms, covenants and conditions of the Lease. Notwithstanding anything in the Lease to the contrary, effective as of the first day of the Extended Term (i.e., September 1, 2017) and provided Tenant is not then in default of the Lease (as hereby amended), Section 21.1 of the Lease shall be terminated and of no further force or effect. Accordingly (and to the extent Landlord had not previously applied any then-unrestored portion of the Existing Security Deposit pursuant to the terms of Section 21.1 of the Lease and that Tenant is not then in default of the Lease (as hereby amended)), on or promptly following September 1, 2017, Landlord shall return the Existing Security Deposit (or unapplied and unrestored portion thereof) to Tenant.

7. **Letter of Credit**. Landlord and Tenant acknowledge that, in accordance with Section 21.2 of the Lease, Tenant has cause an L-C to be delivered to Landlord, and Landlord is currently the beneficiary of such L-C, with an L-C Amount currently equal to $3,245,868.00. Notwithstanding anything in the Lease to the contrary, effective as of the first day of the Extended Term (i.e., September 1, 2017), (i) the required L-C Amount shall be reduced to the sum of One Hundred Thousand Ninety-One Thousand Five Hundred Twenty and No/100 Dollars ($191,520.00) (the "**ET L-C Amount**"), and (ii) Tenant shall be obligated to maintain an L-C in the ET L-C Amount throughout the Extended Term, regardless of the Required Thresholds otherwise set forth in Section 21.2 of the Lease. The parties hereby acknowledge and agree that, with regard to any subsequent Option Term Tenant may exercise in accordance with Section 2.2 of the Lease, the operative provisions of Section 2.2.2 shall control with regard to the maintenance of an L-C during each such Option Term and the then-applicable L-C Amount.

8. **California Accessibility Disclosure**. For purposes of Section 1938 of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges that the Common Areas and the Premises have not undergone inspection by a Certified Access Specialist (CASp).

9. **No Further Modification**. Except as specifically set forth in this First Amendment, all of the terms and provisions of the Lease shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, this First Amendment has been executed as of the day and year first above written.

"LANDLORD":

KILROY REALTY, L.P.,
a Delaware limited partnership

By: Kilroy Realty Corporation,
a Maryland corporation,
General Partner

By: /s/ NELSON ACKERLY

Its: Sr. Vice President

By: /s/ JOHN T. FUCCI

Its: Exec. Vice President

"TENANT":

VICAL INCORPORATED,
a Delaware corporation

By: /s/ VIJAY B. SAMANT

Its: President and CEO

By:

Its: _____

Exhibit 10.2

STOCK PURCHASE AGREEMENT

This Stock Purchase Agreement (this ***"Agreement"***) is made as of August 1st, 2016 (the ***"Effective Date"***), by and between **Vical Incorporated**, a Delaware corporation (the ***"Company"***), having its principal place of business at 10390 Pacific Center Court, San Diego, California 92121, USA, and AnGes MG Inc., a Japanese corporation (the ***"Purchaser"***), having its principal place of business at 7-7-15 Saito-Asagi, Ibaraki, Osaka, 567-0085, Japan. The Company and the Purchaser are individually referred to herein as a "***party***" and collectively as the "***parties***."

Whereas, the Company wishes to sell to the Purchaser, and the Purchaser wishes to purchase from the Company, shares of the Company's common stock, par value $0.01 per share (***"Common Stock"***), on the terms and subject to the conditions set forth in this Agreement.

Agreement

In consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Company and the Purchaser hereby agree as follows:

1. Definitions

The following terms shall have the respective meanings set forth below:

1.1 ***"Acquisition Transaction"*** shall have the meaning set forth in Section 10.1(g).

1.2 ***"Affiliate"*** shall mean any entity controlled by, controlling, or under common control with a party hereto and shall include any entity more than 50% of the voting stock or participating profit interest of which is owned or controlled, directly or indirectly, by a party, and any entity which owns or controls, directly or indirectly, more than 50% of the voting stock of a party.

1.3 ***"Agreement"*** shall have the meaning set forth in the preamble.

1.4 ***"Bankruptcy Event"*** shall mean the Company making an assignment for the benefit of creditors or commencing any proceeding under any bankruptcy, reorganization, insolvency, dissolution or liquidation law of any jurisdiction or any such petition being filed or any such proceeding being commenced against the Company and either (a) the Company by any act indicating its approval thereof, consents thereto or acquiesces therein or (b) such petition, application or proceeding is not dismissed within 90 days.

1.5 ***"Board"*** shall have the meaning set forth in Section 8.1(c).

1.6 ***"Business Day"*** shall mean any day (except Saturdays and Sundays and public holidays) when a majority of deposit-taking banks in each of the City of San Diego, United States of America and Tokyo, Japan are open to take over-the-counter deposits.

1.7 ***"Closing"*** shall mean the closing of the sale and purchase of the Shares.

1.8 ***"Closing Date"*** shall mean the date of the closing of the purchase and sale of the Shares, which shall take place on the Business Day following the satisfaction or waiver of all of the conditions to the obligations of

the parties set forth in Sections 6 and 7 (other than those conditions that by their nature will be satisfied on the Closing Date), or such other date as mutually agreed by the parties; provided, that, the Closing Date is not later than the Outside Date.

1.9 ***"Company Indemnified Party"*** shall have the meaning set forth in Section 11.2(b).

1.10 ***"Confidential Information"*** shall have the meaning set forth in Section 10.5(b).

1.11 ***"Company IP"*** means all material Intellectual Property used or held for use in or reasonably necessary for the conduct of, the business of the Company as currently conducted.

1.12 ***"Company Products"*** means each of the biopharmaceutical products developed, manufactured, sold or distributed by the Company.

1.13 ***"Company Securities"*** shall have the meaning set forth in Section 10.1(a)

1.14 ***"Exchange Act"*** shall mean the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.15 ***"FDA"*** means the United States Food and Drug Administration.

1.16 ***"Federal and State Health Care laws"*** means all: (a) laws and regulations administered by the FDA, including the Food Drug and Cosmetic Act, and any other federal laws and regulations governing the manufacture, distribution, and sale of medical devices, whether or not administered by the FDA; (b) federal fraud and abuse laws and regulations, including the federal patient referral law, 42 U.S.C. § 1395nn, commonly known as "Stark", the federal anti-kickback law, 42 U.S.C. § 1320a-7b, the federal civil monetary penalty statute, 42 U.S.C. §1320a-7a, federal laws and regulations governing exclusion, including 42 U.S.C. §1320a-7, federal laws and regulations regarding the submission of false claims, false billing, false coding, and similar state laws and regulations; (c) federal and state laws and regulations applicable to reimbursement and reassignment; (d) HIPAA and other federal and state privacy laws and regulations; (e) federal laws and regulations affecting the health insurance program for the aged and disabled established by Title XVIII of the Social Security Act; (f) laws and regulations affecting the Tricare, CHAMPUS, Veterans, and black lung disease programs and any other health care program financed with United States government funds; (g) all federal laws and regulations affecting the medical assistance program established by Titles V, XIX, XX, and XXI of the Social Security Act, and all state statutes and plans and regulations for medical assistance enacted in connection with the federal statutes and regulations; (h) state laws and regulations regarding fee splitting, referrals by physicians and other health care professionals, and kickbacks; (i) any other federal or state law or regulation governing medical devices or health care; and (j) with regard to (a)(i) above any law succeeding thereto and all amendments and supplements to the laws and regulations set forth in (a)(i), in each case to the extent applicable to the Company.

1.17 ***"Financial Statements"*** shall mean the financial statements of the Company included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015 and filed with SEC, and in any of the Company's Quarterly Reports on Form 10-Q filed with the SEC subsequent to such Form 10-K and prior to the Effective Date.

1.18 ***"Food Drug and Cosmetic Act"*** means 21 U.S.C 301 *et. seq.*, and all regulations promulgated thereto.

1.19 ***"GAAP"*** means generally accepted accounting principles in the United States as currently in effect.

1.20 ***"Government Health Care Programs"*** means the Medicare, Tricare, CHAMPUS, Veterans, and black lung disease programs and any other health care plan or program that provides health benefits, whether directly, through insurance or otherwise, which is funded directly, in whole or in part, by the United States government, other than the federal employee health benefits program; and any program receiving funds under Titles V, XIX (including Medicaid), and XX of the Social Security Act, or from an allotment to a state under such title, or a state child health plan approved under Title XXI of the Social Security Act, in each case to the extent applicable to the Company.

1.21 ***"HIPAA"*** means the Health Insurance Portability and Accountability Act of 1996, and all regulations and formal guidance promulgated thereunder.

1.22 ***"HSR Act"*** shall mean the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

1.23 ***"Indemnified Party"*** shall have the meaning set forth in Section 8.4(c).

1.24 ***"Indemnifying Party"*** shall have the meaning set forth in Section 8.4(c).

1.25 ***"Intellectual Property"*** shall mean all intellectual property and other similar proprietary rights in any jurisdiction worldwide, whether registered or unregistered, including such rights in and to: (a) patents (including all reissues, divisions, provisionals, continuations and continuations-in-part, re-examinations, renewals and extensions thereof), patent applications, patent disclosures or other patent rights ("**Patents**"); (b) copyrights, design, design registration, and all registrations, applications for registration, and renewals for any of the foregoing, and any "moral" rights ("**Copyrights**"); (c) trademarks, service marks, trade names, business names, logos, trade dress, certification marks and other indicia of commercial source or origin together with all goodwill associated with the foregoing, and all registrations, applications and renewals for any of the foregoing ("**Trademarks**"); (d) trade secrets and business, technical and know-how information, databases, data collections and other confidential and proprietary information and all rights therein, including but not limited to formulations, systems, practices or procedures ("**Trade Secrets**"); (e) software, including data files, source code, object code, application programming interfaces, architecture, files, records, schematics, computerized databases and other software-related specifications and documentation ("**Software**"); and (f) Internet domain name registrations.

1.26 ***"Law"*** shall mean any law, statute, regulation, directive, treaty, code, ordinance, decree, judgment, rule, permits, and the organizational documents and bylaws of the Company.

1.27 ***"Lien"*** shall mean any security interest, pledge, hypothecation, mortgage, lien (including, without limitation, environmental and tax liens), violation, charge, lease, license, encumbrance, claim, servient easement, adverse claim, reversion, reverter, preferential arrangement, restrictive covenant, condition or restriction of any kind, including, without limitation, any restriction on the use, voting, transfer, receipt of income or other exercise of any attributes of ownership.

1.28 ***"Losses"*** shall mean all liabilities, including, without limitation, all fines, fees, losses, costs, claims, judgments, awards, obligations, liabilities, charges, taxes, interest, damages, penalties and expenses (including, without limitation, reasonable attorneys' fees and expenses and costs of investigation and litigation).

1.29 ***"Material Agreement"*** shall have the meaning set forth in Section 4.8.

1.30 ***"Material Adverse Effect"*** shall any circumstances, developments, violations, changes, state of facts or matters that individually or in the aggregate have (i) a material adverse effect on the business, results of operations, employee relationships, customer or supplier relationships, financial condition, properties, assets or liabilities of the Company; provided, however, that for purposes of this clause (i) "*Material Adverse Effect*"

shall not include any changes, effects, events or circumstances to the extent arising out of or resulting from (a) general economic, banking, currency, capital market or political conditions, (b) general market conditions (including in each of clauses (a) and (b) above, war, acts of war, declared or undeclared, outbreaks or escalations of hostilities, or acts or threats of terrorism), or (c) any announcement or public disclosure of the execution of this Agreement or the transactions contemplated hereby, except, in the case of clauses (a) and (b) above, to the extent such conditions have a materially disproportionate adverse impact on the Company relative to other industry participants, and (ii) a material adverse effect on the ability of the Company to timely consummate the transactions contemplated by this Agreement.

1.31 ***"Outside Date"*** shall have the meaning set forth in Section 12.1(d).

1.32 ***"party"*** or ***"parties"*** shall have the meaning set forth in the preamble.

1.33 ***"Person"*** shall mean any natural person, corporation, limited liability company, general or limited partnership, limited liability partnership, joint venture, joint stock company, trust, unincorporated organization, association, sole proprietorship, governmental body, or agency or political subdivision of any government.

1.34 ***"Purchase Price"*** shall mean the purchase price for the Shares calculated by multiplying the total number of Shares by the Share Price.

1.35 ***"Registrable Shares"*** shall mean the Shares; *provided, however*, that Shares shall only be treated as Registrable Shares if and only for so long as they (a) have not been disposed of pursuant to a registration statement declared effective by the SEC, and (b) have not been sold in a transaction exempt from the registration and prospectus delivery requirements of the Securities Act so that all transfer restrictions, resale volume limitations and restrictive legends with respect thereto are removed upon the consummation of such sale and (c) are held by the Purchaser, an Affiliate of the Purchaser or any other Person to whom the rights under Article 8 have been transferred in accordance with Section 8.9.

1.36 ***"Registration Expenses"*** shall mean all expenses incurred by the Company in complying with Section 8 hereof, including, without limitation, all registration, qualification and filing fees, printing expenses, escrow fees, reasonable out of pocket expenses of the Company related to the "road show" for any underwritten offering (including all travel, meals and lodging), fees and disbursements of counsel to the Company, blue sky fees and expenses, the expense of any special audits incident to or required by any such registration and the fees and disbursements of counsel to the Purchaser (up to a maximum of $25,000 for such counsel fees and disbursements) , but excluding all underwriting discounts and selling commissions in an applicable sale of Registrable Shares.

1.37 ***"Registration Statement"*** shall mean a registration statement filed by the Company with the SEC to register Registrable Shares on Form S-3 under the Securities Act or on such other form which is appropriate to register such Registrable Shares for resale from time to time by the Purchaser.

1.38 ***"Release"*** shall mean any release, spill, emission, pouring, pumping, injection, deposit, disposal, discharge, dispersal, leaking or migration into the indoor or outdoor environment or into or out of any assets or properties owned or leased by the Company, as the case may be, including the movement of contaminants through or in the air, soil, surface water, ground water or property.

1.39 ***"Representative"*** shall have the meaning set forth in Section 10.5(a).

1.40 ***"SEC"*** shall mean the United States Securities and Exchange Commission.

1.41 ***"SEC Filings"*** shall mean all reports, schedules, forms, statements and other documents filed or required to be filed by the Company with the SEC pursuant to the requirements of the Securities Act or the Exchange Act, including material filed pursuant to Section 13(a) or 15(c) of the Exchange Act, in each case, together with all exhibits, supplements, amendments and schedules thereto, and all documents incorporated by reference therein.

1.42 ***"Securities Act"*** shall mean the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.43 ***"Shares"*** shall mean 1,841,420 shares of Common Stock being purchased under this Agreement.

1.44 ***"Share Price"*** shall mean $4.2448 per Share.

1.45 "***SPA Purchaser Indemnified Parties***" shall have the meaning set forth in Section 11.2(a).

1.46 ***"Suspension Period"*** shall have the meaning set forth in Section 8.2(b).

1.47 ***"Tax Return"*** shall have the meaning set forth in Section 4.12(a).

1.48 "***Transfer Restriction Expiration Date"*** shall have the meaning set forth in Article 9.

2. Agreement to Sell and Purchase.

2.1 Authorization of Shares. The Company has authorized the sale and issuance to the Purchaser of the Shares under the terms and conditions of this Agreement.

2.2 Sale and Purchase. Subject to the terms and conditions hereof, at the Closing, the Company shall issue and sell to the Purchaser free and clear of all Liens (other than those imposed by this Agreement or by applicable laws or regulations) , and the Purchaser shall purchase from the Company, the Shares at a price per share equal to the Share Price.

3. Closing, Delivery And Payment.

3.1 Closing. The Closing shall take place at the offices of Cooley llp, 4401 Eastgate Mall, San Diego, CA, 92121 at 10 AM (local time) on the Closing Date or at such other place, time and/or date as the Company and the Purchaser may agree in writing (including by electronic transmission). The Company and the Purchaser will use their respective reasonable efforts to cause the Closing Date to occur on August 2nd, 2016 and, if the Closing Date does not occur on such date, then as soon as practicable thereafter prior to the Outside Date; provided, that, no party shall be required as a result of the foregoing to waive any conditions to such party's obligations to consummate the Closing.

3.2 Payment and Delivery.

(a) At the Closing, subject to the terms and conditions hereof, the Purchaser shall pay the Purchase Price by wire transfer of immediately available funds in accordance with wire instructions provided by the Company to the Purchaser at least five Business Days prior to the Closing, and the Company shall deliver to the Purchaser (i) a certificate or certificates registered in the name of the Purchaser, and/or in such nominee name(s) as designated in writing by the Purchaser (or, at the election of the Purchaser, appropriate evidence of a book-entry transfer representing the Shares registered in the name of the Purchaser, and/or in such nominee name(s) as designated in writing by the Purchaser), and (ii) the officer's certificate contemplated in Section 7.5.

(b) The Company acknowledges that the delivery to it of a federal wire reference number indicating that a wire transfer has been initiated for the Purchase Price in immediately available funds to the bank account notified to the Purchaser by the Company pursuant to Section 3.2(a) shall constitute payment by the Purchaser to the Company of the Purchase Price; provided, however, that this Section 3.2(b) shall be null and void if the Purchase Price has not been delivered to such bank account on the Closing Date.

4. Representations, Warranties and Covenants of the Company.

The Company hereby represents and warrants to the Purchaser as of the Effective Date and the Closing Date as follows, in each case except as otherwise disclosed in the SEC Filings only to the extent that the facts giving rise to the exception are readily apparent from a reading of the SEC Filings:

4.1 Organization, Good Standing and Qualification. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business. The Company is duly qualified to transact business as a corporation and is in good standing in each jurisdiction in which the failure so to qualify would have a Material Adverse Effect. The Company does not have any subsidiaries.

4.2 Authorization; Due Execution. The Board has duly authorized the entry by the Company into this Agreement and the transactions contemplated in this Agreement. No other corporate action on the part of the Company is necessary to enter into this Agreement and to consummate the transactions contemplated in this Agreement. This Agreement has been duly authorized, executed and delivered by the Company and, upon due execution and delivery by the Purchaser of this Agreement, this Agreement will be a valid and binding obligation of the Company, enforceable in accordance with its terms, except (a) as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by equitable principles or (b) to the extent that the enforceability of the indemnification provisions set forth in Sections 8.4 and 11 hereof may be limited by applicable laws.

4.3 Capitalization; Valid Issuance of Stock.

(a) The authorized capital stock of the Company consists of (a) 5,000,000 shares of preferred stock, par value $.01 per share, and (b) 160,000,000 shares of Common Stock. As of the close of business on July 25, 2016, no shares of the Company's preferred stock were issued and outstanding or held in treasury, and 9,207,105 shares of Common Stock were issued and outstanding. As of the close of business on July 25, 2016, there were outstanding options to purchase an aggregate of 1,235,620 shares of Common Stock and outstanding restricted stock units covering an aggregate of 101,241 shares of Common Stock. As of the close of business on July 28, 2016, the Company had reserved an aggregate of 655,113 shares of Common Stock for issuance pursuant to the Company's employee benefit plans (including shares issued in respect of awards and shares subject to outstanding awards). All issued shares of Common Stock have been duly authorized and are validly issued, fully paid and are non-assessable and are not subject to and were not issued in violation of any preemptive rights. Except as set forth above, as of the close of business on July 28, 2016, the Company did not have outstanding any securities providing the holder the right to acquire Common Stock, and did not have any commitment to authorize, issue or sell any Common Stock.

(b) The Shares, when issued, sold and delivered in accordance with the terms of Sections 2 and 3 hereof for the consideration and on the terms and conditions set forth herein, will be duly and validly authorized and issued, fully paid and nonassessable and, based in part upon the representations of the Purchaser in this Agreement, will be issued in compliance with all applicable federal and state

securities laws. At the Closing, the Purchaser will acquire good and marketable title to the Shares, free and clear of all Liens (other than those imposed by this Agreement or by applicable laws or regulations).

4.4 No Defaults.

(a) There exists no default under the provisions of any instrument or agreement evidencing, governing or otherwise relating to any material indebtedness of the Company, or with respect to any other agreement, a default under which could have a Material Adverse Effect upon the Company's ability to perform its obligations under this Agreement.

(b) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby (with or without the passage of time or the giving of notice, or both) will (i) with or without the giving of notice or passage of time, or both, violate, be in conflict with or constitute a default (or give rise to any right of termination, amendment, cancellation or acceleration) under any of the terms, conditions or provisions of any Material Agreement to which the Company is a party or by which the Company or any of its assets may be bound; or (ii) violate or conflict with any Laws to which the Company is subject, except in each case for any such conflicts, violations, breaches, defaults or other occurrences which have not had and do not constitute a Material Adverse Effect.

4.5 SEC Filings. The Company has timely filed with the SEC all SEC Filings. The SEC Filings were prepared in accordance with and, as of the date on which each such SEC Filing was filed with the SEC, complied in all material respects with the applicable requirements of the Exchange Act. None of such SEC Filings, including, without limitation, any financial statements, exhibits and schedules included therein and documents incorporated therein by reference, at the time filed, declared effective or mailed, as the case may be, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. To the knowledge of the Company, none of the SEC Filings is the subject of ongoing SEC review or outstanding SEC comment. Each of the balance sheets included in or incorporated by reference into any SEC Filing required to be filed by the Company on or after December 31, 2015 and until the Effective Date presented fairly in all material respects the consolidated financial position of the Company as of its date, and each of the statements of income and of cash flows included in or incorporated by reference into such SEC Filings (including any related notes and schedules) presented fairly in all material respects the results of operations, and changes in financial position, income or cash flows, as the case may be, of the Company for the periods set forth therein (subject, in the case of unaudited statements, to the omission of certain notes not ordinarily accompanying such unaudited financial statements and to normal, year-end audit adjustments, none of which is material), in each case in accordance with generally accepted accounting principles consistently applied during the periods involved, except as may be noted therein.

4.6 Governmental Consents. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, local or provincial governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement, except for such approvals or consents as may be required under the HSR Act and such other notices required or permitted to be filed with certain state and federal securities commissions after the Effective Date, which notices will be filed on a timely basis.

4.7 No Conflict. The Company's execution, delivery and performance of this Agreement does not violate any provision of the Company's Restated Certificate of Incorporation or Bylaws, each as amended as of the date hereof (copies of which have been filed with the Company's SEC Filings), any provision of any order, writ,

judgment, injunction, decree, determination or award to which the Company is a party or by which it is bound, or, to the Company's knowledge, any law, rule or regulation currently in effect having applicability to the Company.

4.8 Material Agreements.

(a) All material agreements required to be filed or required to be incorporated by reference by the Company in its Annual Report on Form 10-K for the fiscal year ended December 31, 2015 under Item 601(b)(10) of Regulation S-K (collectively, the ***"Material Agreements"***) are valid and enforceable against the Company in accordance with their respective terms, except (i) as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, or moratorium or similar laws affecting creditor's and contracting parties' rights generally, and (ii) as enforceability may be subject to general principles of equity and except as rights to indemnity and contribution may be limited by state or federal securities laws or public policy underlying such laws. The Company is not in material breach or default of any terms of any of the Material Agreements, and no condition or event exists which, with the giving of notice or the passage of time or both, would constitute a breach or default of any material term by the Company or any other party there to, or permit the termination, cancellation or acceleration of performance of any material obligation of the Company or any other party to such Material Agreements, except as would not reasonably be expected to result in a Material Adverse Effect. The Company has not received a written notice of termination nor is the Company otherwise aware of any threats to terminate any of the Material Agreements.

(b) There are no Material Agreements to which the Company is a party that impose on the Company any obligations which would materially restrict the business, the use of the assets or other conduct of the Company; including, without limitation, contracts that: (i) contain covenants restricting the ability of the Company from competing in any line of business or geographical area; or (ii) contain most-favored nation clauses under which the Company must set favorable conditions for a counter-party that would materially and adversely impair the Company's ability to conduct its business as described in the SEC Filings.

(c) The Company has never entered into any material strategic alliance agreements, joint venture agreements, or any other similar contracts that remain in effect.

4.9 No Material Adverse Effect. Since December 31, 2015 and prior to the Closing Date, there has not been any event, condition, change, effect, state of facts, circumstance, omission or occurrence that has had a Material Adverse Effect.

4.10 Intellectual Property.

(a) To the Company's knowledge, the Company owns or possesses adequate rights to use all Intellectual Property necessary for the conduct of its businesses as conducted as of the Effective Date, except to the extent any failure to possess such rights would result in a Material Adverse Effect. The conduct of the business of the Company as currently conducted and the products and services of the Company, do not infringe, violate, dilute or misappropriate and have not infringed, violated, diluted or misappropriated any Intellectual Property of any Person ("***Third Party Rights***"), except as would not result in a Material Adverse Effect. Since January 1, 2014, the Company has not received any written notice of any claims (including through an invitation to license, cease and desist or equivalent letter or any other notice of any allegation (including any third party claims for indemnification)) that have been made against the Company, nor is there any pending or, to the Company's knowledge, threatened legal action or any other proceeding alleging the infringement, violation or

misappropriation by the Company, or by the products or services of the Company, of any Third Party Rights. To the Company's knowledge, there is no infringement, misappropriation or violation by any Person of any of the material Company IP.

(b) The Company has taken reasonable steps and security measures in accordance with industry practice to protect, maintain and safeguard the confidentiality of and its rights in all Company-owned Trade Secrets included in Company IP and third party Trade Secrets provided to the Company that are subject to confidentiality obligations, including by requiring all of its employees, contractors and consultants and any other Person whom the Company has authorized to have access to such Trade Secrets to execute confidentiality and non-disclosure agreements or to otherwise be bound by similar obligations of confidentiality and non-use, and to the Company's knowledge, there has not been any breach by any party to such agreements, except in each case, as would not constitute a Company Material Adverse Effect. To the Company's knowledge, no Company IP is in jeopardy of being lost or abandoned through failure to act of the Company.

(c) Each current, and to the Company's knowledge, former, employee, advisor, partner, consultant or contractor of the Company and any other individual (to the extent such individual has been involved in the creation, invention or development of Intellectual Property for or on behalf of the Company) (each such Person, a **"*Contributor*")** has executed and delivered written contracts with the Company that assigns to the Company, or provides the Company with a right to negotiate a license to, all Intellectual Property relating to the business of the Company that are or were created, invented or developed by such Contributors during the course of their work for or on behalf of the Company. Without limiting the foregoing, to the Company's knowledge no Contributor owns or has any right, claim, interest or option, including the right to further remuneration or consideration, with respect to Company IP, nor has any Contributor made any assertions in writing to the Company with respect to any alleged ownership or any such right, claim, interest or option, nor threatened any such assertion; and neither this Agreement nor the transactions contemplated hereby will provide any Contributor with any such right, claim, interest or option.

4.11 Litigation.

(a) Except for those that would not have a Material Adverse Effect, there are no: (i) claims pending or threatened against, relating to or affecting the Company, the business of the Company, or any of the officers, directors or key employees of the Company, or (ii) facts or circumstances that would reasonably be expected to give rise to any claims that would be required to be disclosed pursuant to clause (i).

(b) Except for those that would not have a Material Adverse Effect, none of the Company, or the assets or properties of the Company are subject to any continuing order, outstanding judgment, warrant, decree, or injunction issued by any governmental authority.

4.12 Taxes.

(a) The Company has legally and properly filed all returns and otherwise followed the procedures required in connection with corporate income tax, inhabitant tax, enterprise tax and any other taxes and public dues (including foreign taxes and public dues and back taxes, delinquency tax or additional tax, etc. imposed by the tax authority in relation to the taxes referred to above), and have paid all taxes that became due and payable in a timely manner, or, where not yet due, have been adequately provided for in the Company's Financial Statements (in accordance with GAAP), in each case except as would not result in a Material Adverse Effect. The Company's Financial Statements

reflect an adequate reserve (in accordance with GAAP) for all material taxes payable by the Company through the date of such Financial Statements. All tax returns and reports filed by the Company in connection with the taxes and other documents addressed to the tax authority (collectively, the ***"Tax Returns"***) are true and correct. The Company has not received any request for amendment, or any correction or determination with respect to material issues, that is adverse to the Company from the tax authority with respect to the Tax Returns filed by the Company to date. There are no special agreements or other arrangements (whether or not legally binding) between the Company and the tax authority in connection with the taxes. With respect to the Company, it is not a party to any action by any taxing authority and there is not (to its knowledge) any pending or threatened inquiry, inspection, investigation, attachment, delinquency disposition or other proceeding in relation to the taxation or proceedings for administrative protests relating to taxes, tax litigation or other dispute (whether mandatory or voluntary).

(b) The Company has legally, properly and in a timely manner paid the taxes for which the Company is obligated to withhold income tax at the source or otherwise to collect the taxes and pay them to the tax authority, and has properly accounted for such taxes, except as would not have a Material Adverse Effect.

(c) There are no Liens for taxes upon the assets of the Company other than for current taxes not yet due and payable or for taxes that are being contested in good faith by appropriate proceedings and for which adequate reserves in accordance with GAAP have been made in the Company's Financial Statements, except as would not have a Material Adverse Effect.

(d) No claim has been made by any taxing authority in any jurisdiction where the Company does not file Tax Returns that it is, or may be, subject to tax by that jurisdiction, except as would not have a Material Adverse Effect.

4.13 Environmental Matters.

(a) In relation to the business of the Company, during the three year period prior to the Effective Date, no proceeding or action, domestic or foreign, relating to any environmental law has been taken or is pending and is threatened against the Company by any authority or any third party with respect to the use, Release, manufacture, storage, handling, transportation or disposal of contaminants, except for those that would not have a Material Adverse Effect.

(b) There has not been a Release or threatened Release of any contaminants on the current real property owned, leased or used in connection with the business of the Company in amounts or under circumstances that result in a material violation by the Company of any environmental law, except as would not have a Material Adverse Effect.

4.14 Compliance with Laws. The Company has complied with, and is not in violation or default of, any law to which it or its business is subject, including export and import licensing and other laws, nor has any event occurred nor does any circumstance exist which, with the giving of notice or passage of time or both, would constitute any such violation or breach, except for the violation of such laws that did not have or would not have a Material Adverse Effect.

4.15 No Corrupt Payments.

(a) None of the Company or any of its directors, officers, agents, employees, representatives or any Person authorized to act on their behalf (in their capacities as such), has during the past five years

with respect to the Company's business: (i) used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity (including any political party or party official or candidate for political office); (ii) directly or indirectly paid or delivered any fee, commission or other sum of money or item of property, however characterized, to any finder, agent or other party acting on behalf of or under the auspices of a government official or a governmental authority (including any entity owned or controlled by a governmental authority or of a public international organization) that, in each case, was illegal under any applicable Law; (iii) made any payment, bribe or kickback payment to any customer or supplier or to any officer, director, partner, employee or agent of any such customer or supplier, in each case that was unlawful under any applicable Law; (iv) made any payment to any Person in connection with any contract with a governmental authority (including any entity owned or controlled by a governmental authority or of a public international organization) in violation of any applicable Law; or (v) engaged in any other reciprocal practice, or made any other payment or gave any other consideration to any such customer or supplier or any such officer, director, partner, employee or agent, in each case, that was unlawful under any applicable Law.

(b) No officer, director or, to the Company's knowledge, employee of the Company is employed or a representative of a governmental authority or a public international organization.

4.16 No Undisclosed Liabilities. There are no liabilities of the Company of the type required to be disclosed on the balance sheet of the Company or in the notes thereto in accordance with GAAP and the rules and regulations of the SEC applicable thereto, other than liabilities (a) specifically stated and adequately reserved against in the Company's balance sheet dated December 31, 2015, (b) incurred in the ordinary course of business consistent with past practice since the Company's balance sheet dated December 31, 2015, or (c) that would not constitute a Material Adverse Effect.

4.17 No Brokers or Finders. The Company is not a party to any contract, agreement or understanding with any Person that would give rise to a claim against the Company or the Purchaser for a brokerage commission, finder's fee or like payment in connection with the transactions contemplated by this Agreement (including the issuance and sale of the Shares).

4.18 Regulatory Compliance.

(a) There are no Company Products that are distributed for commercial sale or sold commercially by or on behalf of the Company.

(b) All of the Company Products that are manufactured by the Company are manufactured in compliance in all material respects with the Food, Drug and Cosmetic Act, state law equivalents and similar foreign acts applicable to the Company's Products, including, without limitation, the following: (i) each facility owned by the Company and, to the Company's knowledge, each facility not owned by the Company, that manufactures the Company's Products conforms to applicable current good manufacturing practices and complies with all other applicable requirements of the FDA and other governmental authorities with respect to the manufacture of the Company's Products; (ii) no facility owned by the Company or, to the Company's knowledge, not owned by the Company, that manufactures the Company Products has been the subject of any adverse inspection report by the FDA or other governmental authority; (iii) each of the Company's Products has received all necessary FDA and other approvals necessary for non-commercial manufacture in the United States and in each other country where it is manufactured; (iv) none of the Company Products is subject to an adverse event report, an FDA warning letter (or similar correspondence or notification) or recall, or a public health notification from or to the FDA or other governmental authority; and (v) all Company Products

that are exported by or on behalf of the Company to or from the United States are exported or imported in accordance with all FDA requirements, the Food, Drug, and Cosmetic Act, all similar foreign acts applicable to the Company Products, and all other applicable import and export control Laws, in each case except as would not result in a Material Adverse Effect.

(c) The Company has not engaged in any activities which are prohibited under any Federal and State Health Care Laws (whether applicable to relationships with Government Health Care Programs, commercial third-party payors, healthcare providers or other entities or individuals), including prohibitions on referrals by physicians or other health care licensees, fee splitting, billing, or which otherwise constitute fraud, including the following: (i) making or causing to be made a false statement or representation of a material fact in any application for any benefit or payment; (ii) making or causing to be made any false statement or representation of a material fact for use in determining rights to any benefit or payment; (iii) soliciting, paying or receiving any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind or offering to pay such remuneration (A) in return for referring an individual to a Person for the furnishing or arranging for the furnishing of any item or service for which payment may be made in whole or in part by a Government Health Care Program, or (B) in return for purchasing, leasing, or ordering or arranging for or recommending purchasing, leasing, or ordering any good, facility, service, or item for which payment may be made in whole or in part by any Government Health Care Program, and (iv) filing or causing the filing of any claim for services in violation of federal or state laws and regulations governing referrals by physicians or other health care providers, including 42 U.S.C. § 1395nn and regulations promulgated thereunder, except in each case as would not result in a Material Adverse Effect.

(d) The Company has timely and accurately filed all requisite claims and other reports (including pursuant to the Physician Payments Sunshine Act and any other applicable open records laws of any applicable government entities) required to be filed in connection with all Government Health Care Programs in which the Company participates, if any, except to the extent that the failure to file such claims and reports has not had and would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. There are no Proceedings or orders from any Governmental Authority pending or, to the knowledge of the Company, threatened or scheduled, by or before any governmental authority, which for this purpose includes any intermediary, carrier, CMS, or any other state or federal agency with respect to any Government Health Care Program claim filed by the Company, or program compliance matters (including compliance with all applicable reporting requirements), which individually or in the aggregate have had or would reasonably be expected to result in a Material Adverse Effect. Except for routinely scheduled reviews, no validity review or program integrity review related to the Company Products or services has been conducted by any governmental authority in connection with any Government Health Care Programs or by any other third-party payor, and, to the knowledge of the Company, no such review is scheduled, pending or threatened against or affecting the Company.

(e) No physician who has a financial relationship with the Company (whether an investment or ownership interest or compensation arrangement) refers patients to the products or services of the Company.

(f) The Company has not submitted and does not submit claims to Government Health Care Programs.

(g) None of the Company or its employees or, to knowledge of the Company, independent contractors is or has ever been excluded from participation from any federal or state health care program or listed on the General Services Administration list of excluded parties.

5. Representations, Warranties and Covenants of the Purchaser.

The Purchaser hereby makes the following representations and warranties to the Company:

5.1 Organization and Good Standing. The Purchaser is a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation and has all requisite corporate power and authority to carry on its business.

5.2 Authorization; Due Execution. The Purchaser has the requisite corporate power and authority to enter into this Agreement and to perform its obligations under the terms of this Agreement. All corporate action on the part of the Purchaser, its officers, directors and stockholders necessary for the authorization, execution and delivery of this Agreement have been taken. This Agreement has been duly authorized, executed and delivered by the Purchaser, and, upon due execution and delivery by the Company, this Agreement will be a valid and binding obligation of the Purchaser, enforceable in accordance with its terms, except (a) as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by equitable principles or (b) to the extent that the enforceability of the indemnification provisions set forth in Sections 8.4 and 11 hereof may be limited by applicable laws.

5.3 Ownership in the Company. As of the Closing Date, the Purchaser will not beneficially own (as such term is defined for purposes of Section 16 of the Exchange Act), directly or indirectly, more than 19.9% of the outstanding Common Stock. Other than the rights provided for under this Agreement, the Purchaser does not have any rights to acquire Common Stock.

5.4 Purchase Entirely for Own Account. This Agreement is made with the Purchaser in reliance upon the Purchaser's representation to the Company, which by the Purchaser's execution of this Agreement it hereby confirms, that the Shares purchased by the Purchaser will be acquired for investment for the Purchaser's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that the Purchaser has no present intention of selling, granting any participation in, or otherwise distributing the same. By executing this Agreement, the Purchaser further represents that it does not have any contract, undertaking, agreement or arrangement with any Person to sell, transfer or grant participation to such Person or to any third party, with respect to the Shares, if issued.

5.5 Disclosure of Information. The Purchaser has received all the information that it has requested and that it considers necessary or appropriate for deciding whether to enter into this Agreement and to acquire the Shares. The Purchaser further represents that it has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of the Shares . Section 5.5 is not intended to limit in any respect the representations and warranties made by the Company in Section 4.

5.6 Investment Experience. The Purchaser is an investor in securities of companies in the development stage and acknowledges that it is able to fend for itself, can bear the economic risk of its investment and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in the Shares. The Purchaser also represents it has not been organized solely for the purpose of acquiring the Shares.

5.7 Accredited Investor. The Purchaser is an "accredited investor" as such term is defined in Rule 501 of the General Rules and Regulations promulgated by the SEC pursuant to the Securities Act.

5.8 Restricted Securities. The Purchaser understands that:

(a) the Shares will not be registered under the Securities Act by reason of a specific exemption therefrom, that such securities must be held by it indefinitely and that the Purchaser must, therefore, bear the economic risk of such investment indefinitely, unless a subsequent disposition thereof is registered under the Securities Act or is exempt from such registration;

(b) each certificate representing the Shares, if issued, will be endorsed with the following legends:

(i) THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "*ACT*") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH REGISTRATION IS NOT REQUIRED; and

(ii) Any legend required to be placed thereon under applicable state securities laws.

(c) The Company will instruct its transfer agent not to register the transfer of the Shares (or any portion thereof) unless the conditions specified in the foregoing legends are satisfied, until such time as a transfer is made, pursuant to the terms of this Agreement, and in compliance with Rule 144 under the Securities Act (***"Rule 144"***) or pursuant to a registration statement or, if the opinion of counsel referred to above is to the further effect that such legend is not required in order to establish compliance with any provisions of the Securities Act or this Agreement.

5.9 No Short Sales. The Purchaser has not engaged, and will not engage, in any short sales of the Company's Common Stock within the 50 trading days prior to the Closing Date.

5.10 No Legal, Tax or Investment Advice. The Purchaser understands that nothing in the SEC Filings, this Agreement or any other materials presented to the Purchaser in connection with the purchase and sale of the Shares constitutes legal, tax or investment advice and that independent legal counsel has reviewed these documents and materials on the Purchaser's behalf. The Purchaser has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Shares.

5.11 No Brokers or Finders. The Purchaser is not a party to any contract, agreement or understanding with any Person that would give rise to a claim against the Company for a brokerage commission, finder's fee or like payment in connection with the transactions contemplated by this Agreement (including the issuance and sale of the Shares).

6. Conditions to the Company's Obligations at Closing.

The Company's obligation to sell, issue and deliver the Shares to the Purchaser at the Closing shall be subject to the following conditions to the extent not waived in writing by the Company:

6.1 Receipt of Payment. The Company shall have received payment in full, by wire transfer of immediately available funds, for the Shares, at a price per share equal to the Share Price pursuant to Section 3.2.

6.2 Representations and Warranties; Obligations. The representations and warranties made by the Purchaser in Section 5 hereof shall be true and correct on the Closing Date with the same force and effect as if made on and as of such date (except for those representations and warranties that specifically address matters only as of a particular date). The Purchaser shall have performed and complied with all obligations and conditions required to be performed and complied with by the Purchaser under this Agreement on or prior to the Closing Date.

6.3 HSR Act. Any waiting period applicable to the consummation of the issuance and sale of the Shares to the Purchaser under the HSR Act shall have expired or been terminated.

7. Conditions to the Purchasers' Obligations At Closing.

The Purchaser's obligation to accept delivery of and pay for the Shares at the Closing shall be subject to the following conditions to the extent not waived in writing by the Purchaser:

7.1 Representations and Warranties; Obligations. The representations and warranties made by the Company in Section 4 hereof shall be true and correct in all material respects on the Closing Date with the same force and effect as if made on and as of such date (except for those representations and warranties that specifically address matters only as of a particular date). The Company shall have performed and complied with all obligations and conditions to be performed and complied with by the Company under this Agreement on or prior to the Closing Date.

7.2 HSR Act. Any waiting period applicable to the consummation of the issuance and sale of the Shares to the Purchaser under the HSR Act shall have expired or been terminated.

7.3 No Material Adverse Effect. Since December 31, 2015, no event or events shall have occurred and be continuing that constitutes a Material Adverse Effect.

7.4 Nasdaq Listing. The Shares shall have been approved for listing on the Nasdaq Capital Market subject to notice of issuance by the Company.

7.5 Compliance Certificate. The Company shall have delivered to the Purchaser a certificate dated the Closing Date, signed by the Company's Chief Executive Officer, certifying that the conditions set forth in this Section 7 have been satisfied.

8. Registration Rights.

8.1 Registration of Shares.

(a) At any time that the Purchaser is entitled to sell or transfer any Shares pursuant to Article 9 hereof, the Purchaser may request, in writing, that the Company effect the registration for resale of Registrable Shares pursuant to a Registration Statement. Thereupon, the Company shall, as expeditiously as possible, use its best efforts to effect the registration for resale of all such Registrable Shares. If the Purchaser intends to distribute the Registrable Shares by means of an underwriting, it shall so advise the Company in its request.

(b) The Company shall not be required to effect more than one registration pursuant to this Section 8.1. If the Company has filed a registration statement within six months of the proposed date of filing of the applicable Registration Statement, the Company shall not be obligated to file a Registration Statement until after the end of such six month period. A registration shall not be

counted as "effected" for purposes of this Section 8.1(b) until such time as the applicable registration statement has been declared effective by the SEC.

(c) If at the time of any request to register Registrable Shares pursuant to this Section 8.1, the Company is engaged in any activity which, in the good faith determination of the Company's Board of Directors (the "***Board***"), would be adversely affected by the requested registration, then the Company may at its option direct that such request be delayed for a period not in excess of three months from the effective date of such offering or the date of commencement of such other material activity, as the case may be, such right to delay a given request may not be exercised by the Company more than once in any one-year period.

8.2 Registration Procedures. If and whenever the Company is required by the provisions of this Agreement to use its best efforts to effect the registration of any of the Registrable Shares under the Securities Act, the Company shall do no less than the following:

(a) The Company shall file with the SEC a Registration Statement with respect to such Registrable Shares within 30 days after receiving such request and use its best efforts to cause that Registration Statement to become effective as soon as is reasonably possible.

(b) The Company shall as expeditiously as possible prepare and file with the SEC any amendments and supplements to the Registration Statement and the prospectus included in the Registration Statement and such SEC Filings and other filings required by the SEC, in each case, as may be necessary to keep the Registration Statement effective, in the case of a firm commitment underwritten public offering, until each underwriter has completed the distribution of all securities purchased by it and, in the case of any other offering, until the earlier of the sale of all Registrable Shares covered thereby or such time as all of the Registrable Shares held by the Purchaser that are registered under such Registration Statement can be sold pursuant to Rule 144 without volume limitations or other limitations that would restrict sales under Rule 144 (or any similar provisions then in force) under the Securities Act. Notwithstanding the foregoing, if, at any time following the effectiveness of a Registration Statement, the Company shall have determined that the Company may be required to disclose any material corporate development, the Company may suspend the effectiveness of a Registration Statement until such time as an amendment to such Registration Statement has been filed by the Company and declared effective by the SEC or until such time as the Company has filed an appropriate report with the SEC pursuant to the Exchange Act, by giving notice to the Purchaser. The Company will use its best efforts to limit the length of any period of suspension of a Registration Statements to a reasonable period of time (which shall in no event be longer than 90 days or such longer period of time as is required, due to circumstances outside of the Company's control, such as a delay by the SEC) (a ***"Suspension Period"***), and further, the Company will use its best efforts to amend or supplement such prospectus in order to cause such prospectus not to include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing and end the Suspension Period. The Purchaser agrees that, upon receipt of any notice from the Company of a Suspension Period, the Purchaser will not sell any Registrable Shares pursuant to the Registration Statement during the Suspension Period until (i) the Purchaser is advised in writing by the Company that the use of the applicable prospectus may be resumed, (ii) the Purchaser has received copies of any additional or supplemental or amended prospectus, if applicable, and (iii) the Purchaser has received copies of any additional or supplemental filings which are incorporated or deemed to be incorporated by reference in such prospectus.

(c) The Company shall furnish to the Purchaser such reasonable numbers of copies of the prospectus and the Registration Statement, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as the Purchaser may reasonably request in order to facilitate the public sale or other disposition of its Registrable Shares. If the Company has delivered preliminary or final prospectuses to the Purchaser and after having done so the prospectus is amended to comply with the requirements of the Securities Act, the Company shall promptly notify the Purchaser and, if requested, the Purchaser shall immediately cease making offers of Registrable Shares and return all prospectuses to the Company. The Company shall promptly provide the Purchaser with revised prospectuses and, following receipt of the revised prospectuses, the Purchaser shall be free to resume making offers of its Registrable Shares.

(d) The Purchaser hereby covenants with the Company, in connection with any sale of the Registrable Shares, the Purchaser shall cause the prospectus delivery requirements under the Securities Act to be satisfied and shall otherwise comply with all applicable laws, rules and regulations. The Purchaser acknowledges and agrees that the Registrable Shares sold pursuant to the Registration Statement are not transferable on the books of the Company unless the stock certificate submitted to the transfer agent evidencing such Registrable Shares (or reference to the book entry if stock certificates do not represent the Registrable Shares) is accompanied by a certificate reasonably satisfactory to the Company to the effect that (i) the Registrable Shares have been sold in accordance with such Registration Statement and (ii) the requirement of delivering a current prospectus has been satisfied.

(e) The Company shall use its best efforts to register or qualify the Registrable Shares covered by the Registration Statement under the securities or blue sky laws of such states as the Purchaser shall reasonably request, and do any and all other acts and things that may be necessary or desirable to enable the Purchaser to consummate the public sale or other disposition in such states of its Registrable Shares; *provided, however*, that the Company shall not be required in connection with this Section 8.2(e) to qualify as a foreign corporation or execute a general consent to service of process in any jurisdiction.

(f) The Company shall promptly notify the Purchaser of the happening of any event as a result of which the prospectus included in any Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing.

8.3 Allocation of Expenses. The Company will pay all Registration Expenses of any registration under this Agreement. The Purchaser will pay all other expenses incurred in connection with any registration hereunder.

8.4 Indemnification and Contribution.

(a) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, the Company will indemnify and hold harmless the seller of such Registrable Shares, each underwriter of such Registrable Shares, and each other Person, if any, who controls such seller or underwriter within the meaning of the Securities Act or the Exchange Act against any losses, claims, damages or liabilities, joint or several, to which such seller, underwriter or controlling Person may become subject under the Securities Act, the Exchange Act, state securities or blue sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in any Registration Statement under which such Registrable Shares were

registered under the Securities Act, any preliminary prospectus or final prospectus contained in the Registration Statement, or any amendment or supplement to such Registration Statement or arise out of or are based upon the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and the Company will reimburse such seller, underwriter and each such controlling Person for any legal or any other expenses reasonably incurred by such seller, underwriter or controlling Person in connection with investigating or defending any such loss, claim, damage, liability or action; *provided, however*, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any untrue statement or omission made in such Registration Statement, preliminary prospectus or final prospectus, or any such amendment or supplement, in reliance upon and in conformity with information furnished to the Company, in writing, by or on behalf of such seller, underwriter or controlling Person specifically for use in the preparation thereof.

(b) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, each seller of Registrable Shares, severally and not jointly, will indemnify and hold harmless the Company, each of its directors and officers and each underwriter (if any) and each Person, if any, who controls the Company or any such underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages or liabilities, joint or several, to which the Company, such directors and officers, underwriter or controlling Person may become subject under the Securities Act, Exchange Act, state securities or blue sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement under which such Registrable Shares were registered under the Securities Act, any preliminary prospectus or final prospectus contained in the Registration Statement, or any amendment or supplement to the Registration Statement, or arise out of or are based upon any omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, if the statement or omission was made in reliance upon and in conformity with information relating to such seller furnished in writing to the Company by or on behalf of such seller specifically for use in connection with the preparation of such Registration Statement, prospectuses, amendment or supplement; *provided, however*, that the obligations of each seller of Registrable Shares hereunder shall be limited to an amount equal to the proceeds to such seller of Registrable Shares sold in connection with such registration.

(c) Each party entitled to indemnification under this Section 8.4 (the ***"Indemnified Party"***) shall give notice to the party required to provide indemnification (the ***"Indemnifying Party"***) promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; *provided* that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not be unreasonably withheld); and, *provided* further that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Section 8.4. The Indemnified Party may participate in such defense at such party's expense; *provided, however*, that the Indemnifying Party shall pay such expense if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential differing interests between the Indemnified Party and any other party represented by such counsel in such proceeding. No Indemnifying Party, in the defense of any such claim or litigation shall, except with the written consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to each Indemnified Party of a release from all liability in respect

of such claim or litigation, and no Indemnified Party shall consent to entry of any judgment or settle such claim or litigation without the prior written consent of each other Indemnified Party.

(d) In order to provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) the Purchaser makes a claim for indemnification pursuant to this Section 8.4 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Section 8.4 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of the Purchaser in circumstances for which indemnification is provided under this Section 8.4; then each Indemnifying Party shall contribute to the amount paid or payable by such Indemnified Party as a result of such losses, claims, liabilities, or expenses (or actions in respect thereof) in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and the Indemnified Party as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by such Indemnifying Party or Indemnified Party, and the parties' relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 8.4(d) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in this Section 8.4(d). The amount paid or payable by an Indemnified Party as a result of the losses, claims, damages, liabilities, or expenses (or actions in respect thereof) referred to above shall be deemed to include any legal or other fees or expenses reasonably incurred by such Indemnified Party in connection with investigating or, except as provided in Section 8.4(c), defending any such action or claim. Notwithstanding the provisions of this Section 8.4(d), (A) the Purchaser will not be required to contribute any amount in excess of the net proceeds to it of all Registrable Shares sold by it pursuant to such Registration Statement, and (B) no Person guilty of fraudulent misrepresentation, within the meaning of Section 11(f) of the Securities Act, shall be entitled to contribution from any Person who is not guilty of such fraudulent misrepresentation.

8.5 Information from the Purchaser. If the Purchaser requests a registration pursuant to Section 8.1, it shall furnish to the Company such information regarding the Purchaser and the distribution proposed by the Purchaser as the Company may reasonably request in writing and as shall be required in connection with any registration, qualification or compliance referred to in this Agreement.

8.6 Rule 144 Requirements. The Company agrees to:

(a) make and keep public information available in compliance with the requirements of Rule 144;

(b) use its best efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act;

(c) furnish to the Purchaser upon request (i) a written statement by the Company as to its compliance with the reporting requirements of Rule 144, and the reporting requirements of the Securities Act and the Exchange Act, (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents of the Company as the Purchaser may reasonably request to avail itself of any similar rule or regulation of the SEC allowing it to sell the Shares without registration; and

(d) in connection with any sale, transfer or other disposition by the Purchaser of any Registrable Shares pursuant to Rule 144, upon receipt of reasonable documentation and representations from Purchaser regarding such sale, promptly cause the timely preparation and delivery of certificates representing the Registrable Shares to be sold and the removal of any legend restricting transfers of the Registrable Shares, and enable certificates for such Registrable Shares to be issued (or, in the case of book-entry shares, make or cause to be made appropriate notifications on the books of the Company's transfer agent) for such number of shares and registered in such names as the Purchaser may reasonably request.

8.7 Market Stand-Off. Following the termination of the transfer restrictions in Article 9, if requested by the representative of the underwriters or placement agents in connection with an offering of Common Stock (or other securities) of the Company, the Purchaser shall not sell or otherwise transfer or dispose of any Common Stock (or other securities) of the Company held by the Purchaser for a period specified by a representative of the underwriters, in any case not to exceed 90 days following any registered offering of the Common Stock of the Company. The obligations described in this Section 8.7 shall not apply to a registration effected pursuant to a Registration Statement. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said periods. The Purchaser agrees to execute such agreements as may be reasonably requested by any underwriters that are consistent with this Section 8.7 or that are necessary to give further effect thereto. The obligations of the Purchaser under this Section 8.7 shall (i) terminate immediately upon the Purchaser beneficially owning in the aggregate less than 10% of the Company's outstanding Common Stock, and (ii) apply only so long as all executive officers and directors of the Company agree to similar restrictions relating to such registered offering.

8.8 Termination of Registration Rights. All of the Company's obligations to register Registrable Shares, and the Purchaser's rights to cause such registration, under this Agreement shall cease and terminate upon the earlier of (a) such time as all of the Registrable Shares have been sold by the Purchaser in one or more transactions in which the Purchaser's registration rights under this Section 8 have not been transferred under Section 8.9 or (b) the Purchaser can resell all of its Shares without volume restrictions pursuant to Rule 144 or other limitations that would restrict sales under Rule 144 (or any similar provisions then in force) under the Securities Act.

8.9 Transfer of Registration Rights. Subject to Article 9, the rights granted to the Purchaser by the Company under this Article 8 may be assigned in full by the Purchaser to a third party in connection with a sale by the Purchaser of Registrable Shares to such third party, *provided, that* (a) such transfer is effected in accordance with applicable securities laws; and (b) such transferee agrees to comply with the terms and provisions of this Agreement, and such transfer is otherwise in compliance with this Agreement. Except as specifically permitted by this Section 8.9, the rights of a holder of Registrable Shares shall not be transferable to any other Person, and any attempted transfer shall cause all rights of such holder therein to be forfeited.

9. Restrictions on Transfer .

The Purchaser agrees not to make any disposition of all or any portion of the Shares until the date that is the second anniversary of the Closing Date (such date the "***Transfer Restriction Expiration Date***"). For the avoidance of doubt, subject to Section 8.7, following the Transfer Restriction Expiration Date, the Purchaser shall have the right hereunder to sell all or any portion of the Shares.

10. Additional Covenants.

10.1 Standstill. The Purchaser agrees that for so long as it and its wholly-owned subsidiaries beneficially own 10% or more of the issued and outstanding Common Stock or it has a representative acting in an observer

or director capacity on the Board, except with the prior written consent of the Company, the Purchaser shall not, and shall cause its wholly-owned subsidiaries not to:

(a) acquire, offer to acquire, agree to acquire or cause or effect the acquisition of, directly or indirectly, by purchase or otherwise, beneficial ownership of any securities of the Company or any instruments convertible into or exchangeable or exercisable for securities of the Company (the "***Company Securitie***s") such that the aggregate beneficial ownership of the Purchaser and its wholly-owned subsidiaries (on a combined basis) is 20% or more of the Company's outstanding Common Stock, unless such Company Securities are acquired by way of stock dividends or other distributions or offerings made available to holders of Company Securities generally on a *pro rata* basis;

(b) solicit or encourage any other entity to solicit proxies (as such terms are defined in Regulation 14A under the Exchange Act) with respect to any matter involving the Company or otherwise initiate, propose or solicit, or induce any other Person to initiate, propose or solicit any stockholder of the Company, any stockholder proposal, any tender offer for Company Securities, any change of control of the Company, or for the purpose of convening a stockholders' meeting of the Company;

(c) deposit any Company Securities in any voting trust or subject them to any voting agreement or other agreement of similar effect;

(d) join or form any partnership, limited partnership, syndicate, or other group within the meaning of Section 13(d)(3) of the Exchange Act for the purpose of circumventing or avoiding any of the provisions of this Section 10.1 or encourage, advise or, for the purpose of circumventing or avoiding any of the provisions of this Section 10.1, assist any Person to do any of the foregoing or otherwise take any action individually or jointly with any partnership, limited partnership, syndicate, or other group or assist any other Person or group in taking any action it could not individually take under this Section 10.1;

(e) make, effect, cause, initiate or participate in any Acquisition Transaction (as defined below) with respect to the Company, except as permitted by this Agreement; or

(f) make any public proposals to the Company or any of its Affiliates, directors, officers, or employees concerning any Acquisition Transaction or take any action that would require the Company to make a public announcement regarding the possibility of an Acquisition Transaction with the Purchaser or any of its Affiliates.

(g) For purposes of this Section 10.1, ***"Acquisition Transaction"*** shall mean any transaction involving: (i) any sale, license, lease, exchange, transfer or other disposition of the assets of the Company or any subsidiary of the Company constituting more than 50% of the consolidated assets of the Company or accounting for more than 50% of the consolidated revenues of the Company in any one transaction or in a series of related transactions; (ii) any offer to purchase, tender offer, exchange offer or any similar transaction or series of related transactions made by any Person involving more than 50% of the outstanding shares of capital stock of the Company; or (iii) any merger, consolidation, business combination, share exchange, reorganization or similar transaction or series of related transactions involving the Company or any subsidiary of the Company whereby the holders of voting capital stock of the Company immediately prior to any such transaction hold less than 50% of the voting capital stock of the Company or the surviving corporation (or its parent company) immediately after the consummation of any such transaction.

Notwithstanding the foregoing, nothing in this Section 10.1 shall prohibit the Purchaser from submitting to the Board one or more confidential proposals or offers for a potential Acquisition Transaction (as long as such confidential offer or proposal is made in a manner that would not reasonably be expected to require the Purchaser or the Company to make a public announcement regarding such confidential offer or proposal).

10.2 Termination of Standstill. The obligations of the Purchaser under Section 10.1 shall terminate in the event (a) of any *bona fide* unsolicited third party tender or exchange offer for at least 50% of the outstanding voting capital stock of the Company, (b) the Company enters into any agreement for an Acquisition Transaction with any entity not affiliated with the Purchaser, (c) the Company, upon the decision of the Board, initiates a structured auction process with regard to an Acquisition Transaction, but excluding any market check in response to an unsolicited proposal made by any entity not affiliated with the Purchaser, (d) any Person or group unaffiliated with the Purchaser acquires beneficial ownership of more than 35% of the Common Stock, or (e) the occurrence of a Bankruptcy Event. All of the provisions of Section 10.1 shall be reinstated and shall apply in full force according to their terms in the event that: (i) if the provisions of Section 10.1 shall have terminated as the result of a tender or exchange offer, such tender or exchange offer (as originally made or as amended or modified) shall have terminated (without closing) prior to the commencement of a tender or exchange offer by the Purchaser that would have been permitted to be made pursuant to this Section 10.2 as a result of such third-party tender or exchange offer; (ii) any tender or exchange offer by the Purchaser (as originally made or as extended or modified) that was permitted to be made pursuant to this Section 10.2 shall have terminated (without closing); or (iii) if the provisions of Section 10.1 shall have terminated as a result of any action by the Company referred to in this Section 10.2, the Company shall have determined not to take any of such actions (and no such transaction shall have closed) prior to the commencement of any action by the Purchaser that would have been permitted to be made pursuant to this Section 10.2 as a result of the initial determination of the Company referred to in this Section 10.2. Upon reinstatement of the provisions of Section 10.2, the provisions of this Section 10.2 shall continue to govern in the event that any of the events described in this Section 10.2 shall occur.

10.3 Efforts to Complete.

(a) Each party shall use its commercially reasonable efforts to take, or cause to be taken, all actions, and to do, or cause to be done, and to assist and cooperate with the other party in doing, all things reasonably necessary, proper or advisable under applicable Law to consummate and make effective, in the most expeditious manner practicable, the transactions contemplated by this Agreement, including using commercially reasonable efforts to: (i) cause the conditions set forth in Section 6 and Section 7 to be satisfied; (ii) obtain all necessary actions or non-actions, waivers, consents, approvals, orders and authorizations from governmental authorities and make all necessary registrations, declarations and filings with governmental authorities; and (iii) execute or deliver any additional instruments reasonably necessary to consummate the transactions contemplated by, and to fully carry out the purposes of, this Agreement.

(b) Each party shall cooperate with one another in good faith to (i) promptly determine whether any filings are required to be or should be made, and whether any other consents, approvals, permits or authorizations are required to be or should be obtained, from any governmental authority under any other applicable law in connection with the transactions contemplated hereby, and (ii) promptly make any filings, furnish information required in connection therewith and seek to obtain timely any such consents, permits, authorizations, approvals or waivers that the parties determine are required to be or should be made or obtained in connection with the transactions contemplated hereby.

10.4 Voting Agreement.

(a) At any meeting of the stockholders of the Company, however called, or at any adjournment thereof, (i) the Purchaser shall appear or otherwise cause all its shares of Common Stock to be present thereat for purposes of calculating a quorum, through granting a proxy or otherwise, (ii) the Purchaser shall vote (or cause to be voted) all of its shares of Common Stock, in accordance with (e.g. for, against, withheld, abstain and/or electing any other choice (such as frequency for any stockholder vote on executive compensation)) the recommendation of the Board as set forth in the applicable SEC Filings and (iii) if such meeting involves a vote regarding an Acquisition Transaction or similar transaction that would give rise to any appraisal rights or dissenter's rights in respect of its shares of Common Stock, the Purchaser agrees to waive and not to exercise such appraisal rights or dissenter's rights.

(b) The provisions of this Section 10.4 shall terminate upon the earliest of any of the following events: (i) the Common Stock held by the Purchaser represents less than 10% of the issued and outstanding shares of the Company's Common Stock, (ii) an Acquisition Transaction being consummated with respect to the Company and (iii) a Bankruptcy Event; *provided*, that notwithstanding this Section 10.4(b), if applicable, clause (iii) of Section 10.4(a) shall survive until the expiration of any period in which to perfect or exercise such appraisal rights or dissenter's rights.

10.5 Purchaser Board Rights.

(a) If and for so long as the Purchaser, together with its Affiliates, holds not less than 15% of the issued and outstanding Common Stock, the Purchaser shall have the right to send one representative, who shall initially be Dr. Ei Yamada, (the "***Representative***") to attend in a non-voting capacity all meetings of the Board; *provided*, that the Company shall have the right to exclude the Representative from access to any material or meeting, or portion thereof, if the Company determines in good faith that there is a conflict of interest, or such exclusion is reasonably necessary to preserve its attorney-client privilege or confidentiality. In the event the Representative is unable to attend a meeting of the Board, he or she may appoint a delegate to attend such meeting in the Representative's place; provided that such delegate is approved by the Company in advance, which such approval must not be unreasonably withheld, conditioned or delayed, and provided further that each such delegate shall be deemed to be a "Representative" for purposes of Section 10.5(b). If the Representative resigns or for any other reason ceases to serve in such capacity, the Purchaser may designate a successor Representative, who shall be subject to the Company's approval which such approval must not be unreasonably withheld, conditioned or delayed.

(b) The Purchaser agrees, and shall cause the Representative to agree, to hold in confidence and trust and not use or disclose to any third party any information provided to or learned by the Purchaser or its Representative in connection with the Purchaser's rights under this Section 10.5 or in connection with the Representative's attendance at any meetings of the Board (collectively, "***Confidential Information***"). The foregoing obligations of confidentiality shall not apply to any information that (i) the Purchaser possesses without obligation of confidentiality prior to the date hereof, (ii) the Purchaser develops independently without reference to or reliance on any Confidential Information, (iii) the Purchaser rightfully receives from a third party without any obligation of confidentiality, or (iv) is or becomes publicly available without breach of this Agreement Nothing herein shall prohibit any disclosure of information to the extent required by the order of a court of competent jurisdiction or pursuant to applicable law, rule or regulation, provided that, unless otherwise prohibited by law or court order, the Purchaser shall use all commercially reasonable

efforts to give the Company prior written notice of such disclosure in order that the Company may seek (with the Purchaser's reasonable cooperation) a protective order, confidential treatment, or other appropriate remedy (at the Company's sole cost and expense).

(c) If the Purchaser has continuously held not less than 15% of the issued and outstanding Common Stock from the Closing through the second anniversary of the Closing Date, the Company will appoint the Representative to the Board as a director of the Company, subject to later reelection by the Company's stockholders.

10.6 Notification of Certain Matters. From the Effective Date through the Closing, the Company shall give prompt written notice to the Purchaser of the occurrence or non-occurrence of any event known to the Company the occurrence or non-occurrence of which would reasonably be expected to cause a Material Adverse Effect on the Company or its ability to satisfy the conditions to closing contained in Section 7. From the Effective Date through the Closing, the Purchaser shall give prompt written notice to the Company of the occurrence or non-occurrence of any event known to the Purchaser the occurrence or non-occurrence of which would reasonably be expected to materially impair the Purchaser's ability to satisfy the conditions to closing contained in Section 6.

10.7 Publicity and Announcements. All press releases and other public disclosures concerning the transactions contemplated by this Agreement will be subject to review and approval by the Company and the Purchaser, such approval not to be unreasonably withheld, conditioned or delayed; provided, that to the extent a party shall be required to make an announcement, disclosure or filing pursuant to any law of its home jurisdiction or any jurisdiction in which any of its securities are publicly traded or the rules of any stock exchange upon which its securities are listed or any securities quotation system on which such securities are traded, it shall be permitted to do so without an approval of the Company or the Purchaser, as the case may be; provided, further that such party has used commercially reasonable efforts to consult with the Company or the Purchaser, as the case may be, and strictly limits such announcement, disclosure or filing to the minimum disclosure required by law or such rules. The other parties may then also make an announcement, disclosure or filing containing the same.

11. Indemnification.

11.1 Survival. Each of the representations and warranties set forth in this Agreement shall survive the Closing of this Agreement and expire 12 months after the Closing Date (or until final resolution of any claim or action arising from the breach of any such representation and warranty, if notice of such breach was provided prior to the end of such period); other than the representations and warranties set forth in Sections 4.1 through 4.4, which shall survive the Closing of this Agreement indefinitely. All covenants and agreements contained herein, other than those which by their terms are to be performed in whole or in part after the Closing Date, shall terminate 12 months after the Closing Date.

11.2 Indemnification.

(a) The Company agrees to indemnify and hold harmless the Purchaser and each of its directors, officers, employees, and statutory auditors (the "***SPA Purchaser Indemnified Parties***") to the fullest extent permitted under applicable Law from and against any and all Losses arising out of or resulting from (i) any inaccuracy in or breach of the Company's representations or warranties in this Agreement, or (ii) the Company's breach of its agreements or covenants in this Agreement. For purposes of this Section 11.2(a), in determining the amount of any Losses in respect of the failure of any representation or warranty to be true and correct as of any particular date, and not in determining if a breach has occurred, the representations and warranties in this Agreement (including any

disclosure schedules provided against the representations and warranties in this Agreement) shall be deemed to have been made without any qualifications as to "Material Adverse Effect," "material," "in all material respects" and similar qualifications as to materiality shall be deemed to be deleted therefrom.

(b) The Purchaser agrees to indemnify and hold harmless the Company and its directors, officers, and employees (the "***Company Indemnified Parties***") to the fullest extent permitted under applicable Law from and against any and all Losses arising out of or resulting from (i) any inaccuracy in or breach of the Purchaser's representations or warranties in this Agreement, or (ii) any breach of the Purchaser's agreements or covenants in this Agreement.

11.3 Claims .

(a) An SPA Purchaser Indemnified Party or a Company Indemnified Party, as the case may be, entitled to indemnification under this Section 11 shall give written notice to the party from whom indemnification is sought of any claim with respect to which it seeks indemnification promptly after the discovery by such indemnified Person of any matters giving rise to a claim for indemnification hereunder; provided, that the failure of any indemnified Person to give notice as provided herein shall not relieve the Company or the Purchaser (as the case may be) of its obligations under this Section 11 unless and to the extent that the Company or the Purchaser (as the case may be) shall have been actually materially prejudiced by the failure of such indemnified Person to so notify the Company or the Purchaser (as the case may be). Such notice shall describe in reasonable detail such claim.

(b) In case any such action, suit, claim or proceeding is brought against a SPA Purchaser Indemnified Party or a Company Indemnified Party, as the case may be, by a third-party, the Company or the Purchaser (as the case may be) shall be entitled to assume and conduct the defense thereof, with counsel reasonably satisfactory to the indemnified Person, unless (i) such claim seeks remedies, in addition to or other than, monetary damages that are reasonably likely to be awarded, (ii) such claim involves a criminal proceeding, (iii) counsel to the indemnified Person advises the Company or the Purchaser (as the case may be) in writing that such claim involves a conflict of interest (other than one of a monetary nature) that would reasonably be expected to make it inappropriate for the same counsel to represent both the Company or the Purchaser (as the case may be) and the indemnified Person, or (iv) the Company or the Purchaser (as the case may be) shall not have assumed the defense of the third-party claim within 10 Business Days of receipt of the first notice of such third-party claim sent by the indemnified Person to the Company or the Purchaser (as the case may be) (or sooner, if the nature of the third-party claim so requires or a more timely response is advisable to avoid jeopardizing the defense against such third-party claim). If any one of the foregoing clauses (i) through (iv) applies, the indemnified Person shall be entitled to retain its own counsel at the cost and expense of the Company or the Purchaser (as the case may be) (except that the Company or the Purchaser (as the case may be) shall only be liable for the legal fees and expenses of one law firm for the indemnified Person). If the Company or the Purchaser (as the case may be) assumes the defense of any claim, the indemnified Person shall nevertheless be entitled to hire, at its own expense, separate counsel and participate in the defense thereof. The Company or the Purchaser (as the case may be) shall not, without the indemnified Person's prior written consent (not to be unreasonably withheld, conditioned or delayed), settle or compromise any claim or consent to entry of any judgment in respect thereof in any pending or threatened action, suit, claim or proceeding in respect of which indemnification has been sought hereunder unless such settlement or compromise includes an unconditional release of the indemnified Person from all liability arising out of such action, suit, claim or proceeding. If the indemnifying Party is not assuming and conducting the

defense of an indemnifiable claim, then the indemnified Person shall not settle or compromise an indemnifiable claim without the indemnifying Party's prior consent, which consent shall not be unreasonably withheld, delayed or conditioned.

11.4 Exclusive Remedy. Except for actions grounded in fraud, willful misconduct, intentional misrepresentation or criminal activity, from and after the Closing, the indemnification provided in this Section 11 shall constitute the sole and exclusive remedy for an indemnified Person under this Section 11 for damages arising out of, resulting from or incurred in connection with any claims relating to this Agreement or arising out of the transactions contemplated hereby; provided however, that this exclusive remedy for damages shall not preclude a party from bringing an action for specific performance or other equitable remedy to require a party to perform its obligations under this Agreement.

11.5 No Limitations. No investigation by or knowledge of an SPA Purchaser Indemnified Party or a Company Indemnified Party, as the case may be, shall limit such indemnified Person's exercise of any right under this Section 11 or be deemed to be a waiver of any such right. The parties further acknowledge and agree that the indemnification provisions provided in Section 8 are separate and discrete obligations of the parties and shall have no impact whatsoever on the indemnification provisions in this Section 11.

12. Termination

12.1 Termination. This Agreement may be terminated at any time prior to the Closing:

(a) by the mutual written consent of the Company and the Purchaser;

(b) by the Purchaser, if (i) the Company shall have breached any representation, warranty, covenant or agreement set forth in this Agreement, (ii) such breach is not cured within ten (10) Business Days after the Company receives written notice thereof from the Purchaser (or such shorter period between the date of such notice and the Closing), and (iii) such breach would cause any of the conditions set forth in Section 7 not to be satisfied;

(c) by the Company, if (i) the Purchaser shall have breached any representation, warranty, covenant or agreement set forth in this Agreement, (ii) such breach is not cured within 10 Business Days after the Purchaser receives written notice thereof from the Company (or such shorter period between the date of such notice and the Closing), and (iii) such breach would cause any of the conditions set forth in Section 6 not to be satisfied;

(d) by the Company or the Purchaser if the Closing shall not have occurred by August 4th, 2016 or such other date as mutually agreed in writing by the parties (the "***Outside Date***"); provided, however, that the right to terminate this Agreement under this subclause (d) shall not be available to a party whose failure to fulfill any obligation under this Agreement shall have been the principal cause of, or shall have resulted in, the failure of the Closing to occur on or prior to the Outside Date; or

(e) by the Purchaser in the event (i) (x) any Person unaffiliated with the Purchaser, whether singly or as part of a group, acquires more than 35% of the Common Stock or all or substantially all of the Company's assets (whether by merger, consolidation, business combination, tender or exchange offer, recapitalization, restructuring, sale, equity issuance or otherwise), or (y) the Company shall enter into a definitive agreement with respect to, or shall publicly announce that it plans to enter into a transaction with respect to, any of the foregoing, (ii) a Bankruptcy Event, or (iii) of any transaction or other event in which the Common Stock no longer is required to be registered under the Exchange Act.

12.2 Effect of Termination. In the event of termination of this Agreement as provided herein, this Agreement shall forthwith become void and there shall be no liability under this Agreement on the part of either party hereto except that nothing herein shall relieve either party from liability for any breach of this Agreement that occurred before such termination, and the terms of Sections 10.5 (b), 10.7, 12, and 13 shall survive any such termination.

13. Miscellaneous.

13.1 Waivers and Amendments; Delays. Neither this Agreement nor any provision hereof may be changed, waived, discharged, terminated, modified or amended except upon the written consent of the Company and the Purchaser.

No delay or omission to exercise any right, power or remedy accruing to the Purchaser, upon any breach or default of the Company under this Agreement, shall impair any such right, power, or remedy, nor shall it be construed to be a waiver of any such breach or default, or any acquiescence therein, or a waiver of or acquiescence in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind of character on the Purchaser's part of any breach or default under this Agreement, or any waiver on the Purchaser's part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing and that all remedies, either under this Agreement, or by law or otherwise afforded to the Purchaser, shall be cumulative and not alternative.

13.2 Severability. In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

13.3 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to conflicts of law principles.

13.4 Arbitration. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be submitted exclusively to arbitration. Arbitration shall be administered by the American Arbitration Association (" **AAA**") under the AAA's International Arbitration Rules. The arbitral tribunal award shall be final and binding, shall be the sole and exclusive remedy regarding any and all claims and counterclaims presented, and may not be reviewed by or appealed to any court except for enforcement. Any arbitration under this Agreement shall be conducted in San Francisco, California, USA and in the English language, including all oral presentations and arguments as well as all documentation.

13.5 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original document, and all of which, together with this writing, shall be deemed one instrument. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or .pdf shall be as effective as delivery of a manually executed counterpart of this Agreement.

13.6 Successors and Assigns. Except as expressly provided hereunder, neither this Agreement nor any rights or obligations hereunder may be assigned or otherwise transferred by either party without the prior written consent of the other party; *provided, however*, (a) that either party may assign this Agreement and its rights and obligations hereunder without the other party's consent in connection with the transfer or sale of all or substantially all of the business of such party to a third party, whether by merger, sale of stock, sale of assets or otherwise, and (b) the Purchaser may assign this Agreement and its rights and obligations hereunder without the Company's consent to an Affiliate; provided, that, the Purchaser shall remain liable and responsible to the Company hereto for the performance and observance of all such duties and obligations by such Affiliate.

The rights and obligations of the parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties. Any assignment not in accordance with this Agreement shall be void.

13.7 Entire Agreement. This Agreement and other documents delivered pursuant hereto, including the exhibits, constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof and thereof whether or not the Closing shall have occurred.

13.8 Payment of Fees and Expenses. Each of the Company and the Purchaser shall bear its own expenses and legal fees incurred on its behalf with respect to this Agreement and the transactions contemplated hereby. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

13.9 Notices. Any notice to be given under this Agreement must be in writing and delivered either in person, by any method of mail (postage prepaid) requiring return receipt, or by overnight courier or facsimile confirmed thereafter by any of the foregoing, to the party to be notified at its address given below, or at any address such party has previously designated by prior written notice to the other. Notice shall be deemed sufficiently given for all purposes upon the earliest of: (a) the date of actual receipt; (b) if mailed, seven days after the date of postmark; or (c) if delivered by overnight courier, the second business day the overnight courier regularly makes deliveries.

(a) If to the Company, notices must be addressed to:

Vical Incorporated
10390 Pacific Center Court
San Diego, CA 92121
Attention:
Telephone:
Facsimile: 858-646-1152

(b) If to the Purchaser, notices must be addressed to:

AnGes MG, Inc.
5F, Mita Suzuki Bldg., 5-20-14
Shiba, Minato-ku, Tokyo, 108-0014
Japan
Telephone: 81-3-5730-2480
Facsimile: 81-3-5730-2635

13.10 Headings. The headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

13.11 Disclaimer. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY TO THE OTHER PARTY OF ANY NATURE, EXPRESS OR IMPLIED.

[Signature Page to Follow]

In Witness Whereof, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

Vical Incorporated

By: /s/ Vijay B. Samant
Name: Vijay B. Samant
Title: President and CEO

AnGes MG, Inc.

By: /s/ Ei Yamada
Name: Ei Yamada, Ph.D
Title: President and CEO

[Signature Page to Stock Purchase Agreement]

Exhibit 31.1

CERTIFICATION

I, Vijay B. Samant, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Vical Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. I have disclosed, based on my most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2016

By: /s/ VIJAY B. SAMANT
Vijay B. Samant
Chief Executive Officer and
Acting Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. § 1350, as adopted), Vijay B. Samant, the Chief Executive Officer and Acting Chief Financial Officer of Vical Incorporated (the "Company"), hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended June 30, 2016, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Periodic Report and results of operations of the Company for the period covered by the Periodic Report.

Dated: August 9, 2016

/s/ VIJAY B. SAMANT
Vijay B. Samant
Chief Executive Officer and
Acting Chief Financial Officer

THIS CERTIFICATION "ACCOMPANIES" THE FORM 10-Q TO WHICH IT RELATES, IS NOT DEEMED FILED WITH THE SEC AND IS NOT TO BE INCORPORATED BY REFERENCE INTO ANY FILING OF THE COMPANY UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED (WHETHER MADE BEFORE OR AFTER THE DATE OF THE FORM 10-Q), IRRESPECTIVE OF ANY GENERAL INCORPORATION LANGUAGE CONTAINED IN SUCH FILING. A SIGNED ORIGINAL OF THIS CERTIFICATION HAS BEEN PROVIDED TO THE COMPANY AND WILL BE RETAINED BY THE COMPANY AND FURNISHED TO THE SECURITIES AND EXCHANGE COMMISSION OR ITS STAFF UPON REQUEST.