

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K/A  
(Amendment No. 1)

(Mark One)

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

For the fiscal year ended December 31, 2018

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

(State or other jurisdiction of  
incorporation or organization)

10390 Pacific Center Court, San Diego, California

(Address of principal executive offices)

93-0948554

(I.R.S. Employer  
Identification No.)

92121-4340

(Zip Code)

Registrant's telephone number, including area code: (858) 646-1100

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Common Stock, \$0.01 par value

The Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.  Yes  No

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 every Interactive Data File required to be submitted 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 such files).  Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant, based upon the last sale price of the registrant's common stock reported on the Nasdaq Capital Market on June 30, 2018, was approximately \$19,828,148.

The number of shares of common stock outstanding as of January 31, 2019, was 21,820,195.

Documents Incorporated by Reference:

None.

## EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A amends the Annual Report on Form 10-K of Vical Incorporated (“Vical”, or the “Company”) for the fiscal year ending December 31, 2018, as filed with the Securities and Exchange Commission (“SEC”) on March 1, 2019 (the “Original Filing”). We are filing this Amendment No. 1 to include all of the Part III information required by applicable rules and regulations of the SEC. Our definitive proxy statement for our 2019 Annual Meeting of Stockholders will not be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2018; therefore, we are filing this Amendment No. 1 on Form 10-K/A to provide the Part III information within the required time period. As required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), new certificates of our principal executive officer and principal financial officer are being filed as exhibits to this Amendment No. 1 on Form 10-K/A.

Except as described above, no other changes have been made to the Original Filing. The Original Filing continues to speak as of the date of the Original Filing, and we have not updated the disclosures contained therein to reflect any events which occurred at a date subsequent to the filing of the Original Filing. Accordingly, this Amendment No. 1 on Form 10-K/A should be read in conjunction with the Original Filing and our other SEC filings.

As used in this Amendment No. 1 on Form 10-K/A, unless the context indicates or otherwise requires, “Vical,” “our company,” “we,” “us,” and “our” refer to Vical Incorporated, a Delaware corporation.

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### FORWARD-LOOKING STATEMENTS

In addition to historical information, this 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, our ongoing evaluation of strategic alternatives 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. Actual results could differ materially from those discussed in this report. Factors that could cause or contribute to such differences include, but are not limited to, those identified in Item 1A entitled “Risk Factors” beginning on page 11 of the Original Filing, as well as those discussed in our other filings with the Securities and Exchange Commission, or SEC, including our Quarterly Reports on Form 10-Q. As a result, you are cautioned not to unduly 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.

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## PART I II

### ITEM 1 0. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We have three classes of directors serving staggered three-year terms. Our Board of Directors (our “Board”) is presently composed of seven directors. Class I and Class III currently consist of two directors and Class II consists of three directors.

Set forth below is biographical information as of March 1, 2019, for our current directors. There are no family relationships among our executive officers or directors.

<u>Name</u>	<u>Age</u>	<u>Position(s) Held with Vical</u>	<u>Director Since</u>
R. Gordon Douglas, M.D.	84	Chairman of the Board	May 1999
Richard M. Beleson	65	Director	May 2013
Gary A. Lyons	67	Director	March 1997
Robert C. Merton, Ph.D.	74	Director	March 2002
George J. Morrow	67	Director	October 2012
Vijay B. Samant	66	Director, President and Chief Executive Officer	November 2000
Thomas E. Shenk, Ph.D.	72	Director	December 2015

*R. Gordon Douglas, M.D.* , currently serves as chairman of the board of directors for NovaDigm Therapeutics Inc. Dr. Douglas served on the boards of directors of Protein Sciences Corporation from 2011 to 2017, Middlebrook Pharmaceuticals Inc. from 2000 to 2010, Aeras from 2000 to 2014 and IOMAI Corporation from 2002 to 2008. Dr. Douglas consulted for the Dale and Betty Bumpers Vaccine Research Center at the National Institutes of Health from 1999 to 2011. He is currently a Professor Emeritus of Medicine at Weill Cornell Medical College. Dr. Douglas retired in April 1999 from Merck & Co., Inc. (“Merck”), where he had been President of the Merck Vaccine Division since 1991 and a member of the Merck Management Committee. Prior to joining Merck, Dr. Douglas was Chairman of the Department of Medicine and Physician-in-Chief at the New York Hospital-Cornell Medical Center, and he held earlier teaching, research and administrative posts at the University of Rochester Medical Center and Baylor College of Medicine. He holds a bachelor’s degree from Princeton University and an M.D. degree from Weill Cornell Medical College. Dr. Douglas received his medical staff training at The New York Hospital and Johns Hopkins Hospital and is Board Certified in Internal Medicine. He is a member of the National Academy of Medicine, the Association of American Physicians, the Infectious Diseases Society of America and numerous other organizations. Our Board believes that Dr. Douglas’ extensive industry-specific expertise, including his previously held role as President of Merck’s vaccine division, as well as his extensive experience as a physician and academician , provide him with the qualifications and skills to serve on our Board.

*Richard M. Beleson* retired as a Senior Vice President with the Capital Group Companies in 2010, where from 1984 until his retirement, he served as an equity investment analyst and institutional investor focused on the biotechnology and pharmaceutical industries. Mr. Beleson also served as a Vice President of the Growth Fund of America, and during his career had investment responsibilities in the Investment Company of America, Washington Mutual Investors Fund, the Income Fund of America, Fundamental Investors, the AMCAP Fund, the New Perspective Fund, and the Smallcap World Fund. Mr. Beleson holds a B.S. degree in biological sciences from Stanford University and an M.B.A. degree in finance and accounting from the UCLA Graduate School of Management. He currently serves on the advisory board of the UCLA Anderson School of Management Center for Global Management. Our Board believes that Mr. Beleson’s extensive experience in the finance and investment industry, including his previous role as Senior Vice President with the Capital Group Companies, as well as his extensive experience as an equity investment analyst and institutional investor focused on the biotechnology and pharmaceutical industries , provide him with the qualifications and skills to serve on our Board.

*Gary A. Lyons* held various positions with Neurocrine Biosciences, Inc., a biopharmaceutical company, for 16 years through January 2008, including President, Chief Executive Officer and member of the board of directors. From 1983 to 1993, Mr. Lyons held various executive positions at Genentech, Inc., a biotechnology company, including Vice President of Business Development, Vice President of Sales, and Director of Sales and Marketing. Mr. Lyons presently serves as a member of the board of directors of Neurocrine Biosciences, Inc. and Novus Therapeutics, Inc. and is chairman of the board of directors of Rigel Pharmaceuticals, Inc. and Retrophin, Inc., all of which are publicly held biotechnology companies. In addition, Mr. Lyons served previously on the board of directors of PDL BioPharma, Facet Biotech Corporation, KaloBios Pharmaceuticals, Inc. and NeurogesX, Inc. Mr. Lyons holds a bachelor’s degree in marine biology from the University of New Hampshire and an M.B.A. degree from Northwestern University, J.L. Kellogg Graduate School of Management. Our Board believes that Mr. Lyons’ extensive managerial experience, including his role as

a Chief Executive Officer and other executive level positions at public and private companies in the biotechnology sector provide him with the qualifications and skills to serve on our Board.

*Robert C. Merton, Ph.D.*, is currently the School of Management Distinguished Professor of Finance at the MIT Sloan School of Management. He is also University Professor Emeritus at Harvard University and the Resident Scientist at Dimensional Holdings, Inc. Dr. Merton was the George Fisher Baker Professor of Business Administration from 1988 to 1998 and the John and Natty McArthur University Professor from 1998 to 2010 at the Harvard Business School. He previously served on the finance faculty of the MIT Sloan School of Management from 1970 until 1988. Dr. Merton received the Alfred Nobel Memorial Prize in Economic Sciences in 1997 for a new method to determine the value of derivatives. He is a past President of the American Finance Association, a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences. Dr. Merton served as a member of the board of directors of Dimensional Funds from 2003 to 2009. Until September 2008, Dr. Merton was also a director and the Chief Science Officer of Trinsum, created in 2007 by a merger of Marakon Associates and Integrated Finance Limited, a specialized investment bank he co-founded in 2002. Dr. Merton served as a director of Community First Financial Group and Peninsula Banking Group from 2003 to 2010. He serves on advisory boards of several companies and institutions. Some of Dr. Merton's other financial and accounting experience includes serving as a Senior Advisor to and Managing Director of JP Morgan Chase & Co. from 1999 to 2001, and a cofounder and principal of Long-Term Capital Management, L.P. He has received numerous academic awards and has lectured widely. Dr. Merton holds a B.S. degree in engineering mathematics from Columbia University, an M.S. degree in applied mathematics from the California Institute of Technology, and a Ph.D. degree in economics from MIT. In addition, Dr. Merton holds numerous honorary degrees. Our Board believes that Dr. Merton's global experience in finance and investments, financial planning and risk management provide him with the qualifications and skills to serve on our Board.

*George J. Morrow* served as Executive Vice President, Global Commercial Operations at Amgen Inc., a global biotechnology company, from 2003 until his retirement in 2011. Mr. Morrow also served as Amgen's Executive Vice President of Worldwide Sales and Marketing from 2001 to 2003. From 1992 to 2001, Mr. Morrow held multiple leadership positions at GlaxoSmithKline Inc. and its subsidiaries, last serving as President and Chief Executive Officer of Glaxo Wellcome Inc. Mr. Morrow currently serves on the boards of directors of Align Technology, Inc. and Neurocrine Biosciences, Inc. Mr. Morrow has served previously on boards for Glaxo Wellcome, Inc., Human Genome Sciences, Inc., Safeway, Inc., the Johns Hopkins School of Public Health, National Commerce Bank and the Duke University Fuqua School of Business. Mr. Morrow holds a B.S. in chemistry from Southampton College, Long Island University, an M.S. in biochemistry from Bryn Mawr College and an M.B.A. from Duke University. Our Board believes that Mr. Morrow's global experience in commercial activities and oncology, as well as his experience managing policy and strategies with various government agencies provide him with the qualifications and skills to serve on our Board.

*Vijay B. Samant* joined us as President and Chief Executive Officer in November 2000. Prior to joining us, he had 23 years of diverse U.S. and international sales, marketing, operations, and business development experience with Merck. From 1998 to 2000, he was Chief Operating Officer of the Merck Vaccine Division. From 1990 to 1998, he served in the Merck Manufacturing Division as Vice President of Vaccine Operations, Vice President of Business Affairs and Executive Director of Materials Management. Mr. Samant holds a master's degree in management studies from the Sloan School of Management at MIT, a master's degree in chemical engineering from Columbia University, and a bachelor's degree in chemical engineering from the University of Bombay, University Department of Chemical Technology. Mr. Samant presently serves as a member of the board of directors of AmpliPhi Biosciences Corporation. Mr. Samant was a member of the board of directors of Raptor Pharmaceutical Corporation from 2011 to 2014, and was a member of the board of directors for BioMarin Pharmaceutical Inc. from 2002 to 2004. Mr. Samant was a Director of the Aeras Global TB Vaccine Foundation from 2001 to 2010, a member of the Board of Trustees for the National Foundation for Infectious Diseases from 2003 to 2012, and a member of the Board of Trustees for the International Vaccine Institute in Seoul, Korea from 2008 to 2012. Our Board believes that Mr. Samant's extensive expertise in biopharmaceutical development and product commercialization, as well as his strong technical and entrepreneurial experience in diverse fields provide him with the qualifications and skills to serve on our Board.

*Thomas E. Shenk, Ph.D.*, has held various positions at Princeton University since 1984. Dr. Shenk is currently the James A. Elkins Professor in the Life Sciences at Princeton University, is a pre-eminent virologist and is a leading expert on human cytomegalovirus. His laboratory's current areas of focus include the use of genetic and proteomic approaches for the dissection of cytomegalovirus gene functions and the cellular response to infection, as well as the development and analysis of models for study of viral latency. Dr. Shenk is a fellow of the American Academy of Microbiology and the American Academy of Arts and Sciences. He is also a member of the U.S. National Academy of Sciences, the U.S. National Academy of Medicine and the American Philosophical Society. He is a past president of the American Society for Virology and the American Society for Microbiology, and he served on the board of directors of Merck for 11 years. He currently serves on the boards of FORGE Life Science, LLC and MeiraGTx Holdings plc and previously served on the board of Kadmon Holdings, Inc. Our Board believes that Dr. Shenk's extensive expertise in the life sciences, including his expertise in virology and human cytomegalovirus provide him with the qualifications and skills to serve on our board of directors.

## **Board Leadership Structure and Risk Management**

Our Chairman of the Board position is a non-executive position and is separate from the position of Chief Executive Officer. Separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of the Board to lead our Board in its fundamental role of providing advice to and independent oversight of management. Our Board recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our Chairman, particularly as the Board's oversight responsibilities continue to grow. Our Board believes that having separate positions, with an independent, non-executive director serving as Chairman, is the appropriate leadership structure for our Company at this time and allows each of the positions to be carried out more effectively than if one person were tasked with both the day-to-day oversight of our business as well as leadership of our Board.

The Board has an active role in overseeing the Company's risk management. The Board regularly reviews information presented by management regarding the Company's business and operations risks, including those relating to liquidity, regulatory and compliance, and monitors risk through Board reports and discussions regarding risk at Board meetings. The Board also reviews and approves corporate goals and budgets on an annual basis. Further, pursuant to its charter, the Audit Committee reviews with the Board any issues that may arise in the performance of its duties, including those relating to the quality or integrity of the Company's financial statements, the Company's compliance with legal or regulatory requirements and its Code of Business Conduct and Ethics. The Compensation Committee monitors risk related to compensation policies and the Nominating/Governance Committee monitors risk related to governance and succession planning.

## **Insider Trading Policy**

We have an insider trading policy which establishes guidelines for the trading of our stock by our employees. The policy specifically restricts trading in our stock by employees during specified time periods generally surrounding the anticipated release of our annual or quarterly financial results. The policy also prohibits individuals that are deemed to be insiders from holding our stock in a margin account or pledging our stock as collateral for a loan at any time. In addition, the policy prohibits insiders from engaging in short sales, transactions in put or call options or derivative transactions (including but not limited to forward sale contracts, zero-cost collars or other hedging or monetization transactions) with respect to our stock at any time.

## **Corporate Governance Guidelines**

We are committed to the diligent exercise of sound corporate governance principles. Our Board has adopted Corporate Governance Guidelines to provide assistance to the Board in managing Board composition, representation, function and performance. The Corporate Governance Guidelines are attached as an exhibit to the charter of our Nominating/Governance Committee, which is available on our website at [www.vical.com](http://www.vical.com).

## **Executive Sessions**

As required under Nasdaq listing standards, our independent directors meet in regularly scheduled executive sessions at which only independent directors are present.

## **Stockholder Communications with the Board of Directors**

Our Board has adopted a formal process for stockholder communications with the Board or individual directors. Information regarding this process is available on our website at [www.vical.com](http://www.vical.com).

## **Committees of the Board of Directors**

During the fiscal year ended December 31, 2018, our Board had three standing committees: an Audit Committee, a Compensation Committee and a Nominating/Governance Committee. The Audit Committee, Compensation Committee and Nominating/Governance Committee each operate under a written charter adopted by our Board, all of which are available on our website at [www.vical.com](http://www.vical.com).

The following table provides membership and meeting information as of and for the fiscal year ended December 31, 2018, for each of the committees:

Name	Audit	Compensation	Nominating/ Governance
Richard M. Beleson	X		
R. Gordon Douglas, M.D.		X	X
Gary A. Lyons		X	X *
Robert C. Merton, Ph.D.	X *		
George J. Morrow	X	X *	
Thomas E. Shenk, Ph.D.			X
Total meetings held in fiscal year 2018	4	1	1

\* Chairperson

During the fiscal year ended December 31, 2018, each director attended at least 75% in the aggregate of the meetings of the committees on which he served.

Below is a description of each committee of our Board. Our Board has determined that each committee member is independent within the meaning of applicable Nasdaq listing standards.

#### ***Audit Committee***

Our Board has a separately designated standing Audit Committee established in accordance with Section 3(a)(58)A of the Exchange Act. The Audit Committee oversees our corporate accounting and financial reporting processes, our systems of internal control over financial reporting and audits of our financial statements. Among other functions, the Audit Committee evaluates the performance of and assesses the qualifications of the independent registered public accounting firm; engages the independent registered public accounting firm; determines whether to retain or terminate the existing independent registered public accounting firm or to appoint and engage a new independent registered public accounting firm; confers with senior management and the independent registered public accounting firm regarding the adequacy and effectiveness of internal control over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; reviews and approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on our audit engagement team as required by law; reviews annually the Audit Committee's written charter and the committee's performance; reviews the financial statements to be included in our Annual Report on Form 10-K; and discusses with management and the independent registered public accounting firm the results of the annual audit and the results in our quarterly financial statements. The Audit Committee has the authority to retain special legal, accounting or other advisors or consultants as it deems necessary or appropriate to carry out its duties.

Our Board has determined that Robert C. Merton, Ph.D., qualifies as an "audit committee financial expert," as defined in applicable SEC rules. In making such determination, the Board made a qualitative assessment of Dr. Merton's level of knowledge and experience based on a number of factors, including his formal education and experience. Our Board has determined that each member of the Audit Committee is independent under the Nasdaq rules and Rule 10A-3 under the Exchange Act.

#### ***Compensation Committee***

The Compensation Committee oversees our overall compensation strategy and related policies, plans and programs. Among other functions, the Compensation Committee determines and approves the compensation and other terms of employment of our Chief Executive Officer; determines and approves the compensation and other terms of employment of our other executive officers, as appropriate; reviews and recommends to the Board the type and amount of compensation to be paid to Board members; recommends to the Board the adoption, amendment and termination of our Amended and Restated Stock Incentive Plan (the "Stock Incentive Plan"); administers the Stock Incentive Plan; and reviews and establishes appropriate insurance coverage for our directors and executive officers. The Compensation Committee has the authority to retain special legal, accounting or other advisors or consultants as it deems necessary or appropriate to carry out its duties. The Compensation Committee has broad power to form and delegate its authority to subcommittees pursuant to its charter. The Compensation Committee has delegated authority to the President's Stock

Option Committee, which was established by our Board, to make equity grants within certain parameters, beyond which Compensation Committee approval is required.

### ***Nominating/Governance Committee***

The Nominating/Governance Committee is responsible for identifying, reviewing and evaluating candidates to serve on our Board; reviewing and evaluating our incumbent directors and the performance of our Board; recommending candidates for election to our Board; making recommendations to the Board regarding the membership of the committees of our Board; assessing the performance of our Board, including its committees; and developing a set of corporate governance guidelines for Vical.

### **Board Meetings**

During the fiscal year ended December 31, 2018, our Board held four meetings. All directors attended at least 75% in the aggregate of the meetings of our Board.

## **CODE OF BUSINESS CONDUCT AND ETHICS**

We have adopted a Code of Business Conduct and Ethics (“Code of Ethics”) applicable to all of our officers, directors and employees, including our principal executive officer, principal financial officer, principal accounting officer and controller, or persons performing similar functions, which can be viewed on our website at [www.vical.com](http://www.vical.com). If we make any substantive amendments to our Code of Ethics or grant any waiver from a provision of the Code of Ethics to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website.

## **DIRECTOR COMPENSATION**

The compensation program for our non-employee directors is intended to fairly compensate them for the time and effort required of a director. We use a combination of cash and stock-based incentive compensation to attract and retain qualified candidates to serve on the Board. The Board also takes into consideration our corporate performance when determining the appropriate level of non-employee director compensation.

### **Director Fees**

Each of our non-employee directors receives an annual fee of \$44,000 for service on the Board. All fees are paid on a quarterly basis. Non-employee directors are also reimbursed for their expenses for each meeting attended.

### **Director Equity Awards**

Under the Stock Incentive Plan, each of our new non-employee directors, on the date of his or her election to the Board, receives an option to purchase 6,500 shares of our common stock at its fair market value on the date of grant. The shares subject to these options generally vest 25% on the first anniversary of the date of grant, with the remaining shares vesting quarterly over the next three years. Each non-employee director who has served on our Board for at least six months on the date of each regular Annual Meeting of Stockholders also receives an annual grant of an option to purchase 6,500 shares of our common stock. These options vest in full on the date of the regular Annual Meeting of Stockholders for the year following the year in which the options were granted. No more than an aggregate of 30% of the shares available under our Stock Incentive Plan are available for grant to non-employee directors. Our Board may provide discretionary grants under the Stock Incentive Plan to our non-employee directors. Under the Stock Incentive Plan, stock-based awards to purchase a total of 308,354 shares of our common stock have been granted to our current non-employee directors, with 40,500 shares of this total amount granted during the fiscal year ended December 31, 2018.

### **Fees and Equity Awards of the Chairman of the Board of Directors**

Dr. Douglas receives a total annual fee of \$64,000 for serving as Chairman of our Board. Our Chairman of the Board also receives an annual grant of an option to purchase 8,000 shares of our common stock under the Stock Incentive Plan (in lieu of the annual grant of an option to purchase 6,500 shares which he would otherwise receive as a non-employee director), which vests in full on the date of the regular Annual Meeting of Stockholders for the year following the year in which the options were granted.

### **Committee Fees**

The Chairman of the Audit Committee receives an annual Audit Committee Chairman fee of \$25,000. The Chairman of the Compensation Committee receives an annual Compensation Committee Chairman fee of \$15,000. The Chairman of the

Nominating/Governance Committee receives an annual Nominating/Governance Committee Chairman fee of \$10,000. All non-chairman Committee members receive an additional annual fee of \$7,000 for each committee on which they serve.

### Director Compensation Table

The table below summarizes the compensation paid by the Company to non-employee directors for the fiscal year ended December 31, 2018.

Name(1)	Fees Earned in Cash (\$)	Option Awards (\$)(2)	All Other Compensation (\$)	Total (\$)
R. Gordon Douglas, M.D.	78,000	5,790	—	83,790
Richard M. Beleson	51,000	4,704	—	55,704
Gary A. Lyons	61,000	4,704	—	65,704
Robert C. Merton, Ph.D.	69,000	4,704	—	73,704
George J. Morrow	66,000	4,704	—	70,704
Thomas E. Shenk, Ph.D.	51,000	4,704	—	55,704

- (1) Vijay B. Samant, the Company's President and CEO, is not included in this table as he is an employee of the Company and thus receives no compensation for his service as a director.
- (2) These amounts represent the grant date fair value of equity-based awards granted by the Company during 2018, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For a detailed discussion of our grant date fair value calculation methodology, including assumptions and estimates inherent therein, please refer to Note 1 of the financial statements contained in the Original Filing. As of December 31, 2018, each director had the following number of shares underlying restricted stock units and options outstanding, respectively: R. Gordon Douglas, M.D. – 0 and 72,330; Richard M. Beleson – 0 and 33,518; Gary A. Lyons – 0 and 53,124; Robert C. Merton, Ph.D. – 0 and 53,124; George J. Morrow – 0 and 37,090; and Thomas E. Shenk, Ph.D. – 248 and 25,500.

### ITEM 11. EXECUTIVE COMPENSATION

Our named executive officers for the year ended December 31, 2018 are listed below. Biographical information about each of the Company's executive officers and other executives is contained in the Original Filing.

- Vijay B. Samant, Chief Executive Officer
- Larry R. Smith, Ph.D., Sr. Vice President, Research
- Mammen P. Mammen, Jr., M.D., Sr. Vice President, Clinical Development (*terminated effective February 19, 2019*)

The primary objectives of the Compensation Committee of our Board with respect to executive compensation are to attract, retain, and motivate the best possible executive talent. In doing so, the Compensation Committee seeks to tie short and long-term cash and equity incentives to achievement of measurable corporate and individual performance objectives, and to align executives' incentives with stockholder value creation. To achieve these objectives, the Compensation Committee has maintained compensation plans that tie a substantial portion of executives' overall compensation to our research, clinical, regulatory, commercial, financial and operational performance.

#### Market Compensation Data

The Compensation Committee develops our compensation plans by utilizing subscription compensation survey data for national and regional companies in the biopharmaceutical industry and publicly available compensation data from a peer group. In addition, the Compensation Committee will, from time to time, use the services of a compensation consultant. The Compensation Committee retained the services of an independent compensation consultant to support its 2018 compensation review.

#### Determination of Executive Compensation

After performing individual evaluations, the CEO submits recommendations for approval to the Compensation Committee for salary increases, cash bonuses, and stock-based awards for the other executives. In the case of the CEO, his individual performance

evaluation is conducted by the Compensation Committee, which determines his base salary, cash bonus, and stock-based awards. Annual base salary increases, annual stock-based awards, and annual cash bonuses, to the extent granted, are implemented during the first calendar quarter of the year.

In addition to corporate and individual goal achievement, the Compensation Committee also considers the following factors in determining an executive's compensation package:

- the executive's role within the Company and the compensation data for similar persons in peer group companies and subscription compensation survey data;
- the demand for executives with the executive's specific expertise and experience;
- a comparison to other executives within the Company having similar levels of expertise and experience; and
- uniqueness of the executive's industry skills.

The Compensation Committee retains ultimate discretion as to whether any salary increases, cash bonuses or stock-based awards will be awarded for any year, including whether to accept or vary from the CEO's recommendations for other executives.

### ***Compensation Components***

The components of our compensation package are as follows:

#### *Base Salary*

Base salaries for our executives are established based on the scope of their responsibilities and their prior relevant background, training, and experience, taking into account competitive market compensation paid by the companies represented in the compensation data we review for similar positions and the overall market demand for such executives at the time of hire. As with total executive compensation, we believe that if our executives meet the performance expectations of the Compensation Committee, then their base salaries should be in line with the median range of salaries for executives in similar positions and with similar responsibilities in the companies of similar size to us represented in the compensation data we review. However we also believe that superior performance may, if justified, warrant compensation levels at up to the 100<sup>th</sup> percentile of the compensation data we review. An executive's base salary is also evaluated together with other components of the executive's other compensation to ensure that the executive's total compensation is in line with our overall compensation philosophy.

Base salaries are reviewed annually as part of our annual performance program and increased for merit reasons, based on the executive's success in meeting or exceeding individual performance objectives and an assessment of whether significant corporate goals were achieved. If necessary, we also realign base salaries with market levels for the same positions in the companies of similar size to us represented in the compensation data we review, if we identify significant market changes in our data analysis. Additionally, the Compensation Committee adjusts base salaries as warranted throughout the year for promotions or other changes in the scope or breadth of an executive's role or responsibilities.

#### *Annual Bonus*

Our compensation program includes eligibility for an annual performance-based cash bonus in the case of all executives and certain non-executive employees. The amount of the cash bonus depends on the level of achievement of the stated corporate, department, and individual performance goals, with a target bonus generally set as a percentage of base salary. Currently, all executives and certain non-executive employees are eligible for annual performance-based cash bonuses. The bonus amounts for our executives typically range between 25% - 50% of their base salary. The payment of any bonus is at the discretion of the Compensation Committee.

#### *Long-Term Incentives*

We believe that long-term performance is achieved through an ownership culture that encourages long-term participation by our executives through equity-based awards. Our Stock Incentive Plan allows the grant to executives of stock options, restricted stock, and other equity-based awards. We typically make an initial equity award of stock options to new employees and annual stock-based grants as part of our overall compensation program. The cumulative amount of stock options granted as part of our annual performance program is approved by the Compensation Committee. All equity-based awards granted to executives are approved by our Compensation Committee or our Board. Our current practice, as required by our Stock Incentive Plan, is to price equity-based awards at the closing price of our common stock on the date the awards are granted.

*Initial stock option awards* . Executives who join us are awarded initial stock option grants. These grants have an exercise price equal to the fair market value of our common stock on the grant date and a vesting schedule of 25% on the first anniversary of the date of hire and quarterly thereafter for the next three years. The amount of the initial stock option award is determined based on the executive's position with us and analysis of the competitive practices of the companies similar in size to us represented in the compensation data that we review. The amount of the initial stock option award is also reviewed in light of the executive's base salary and other compensation to ensure that the executive's total compensation is in line with our overall compensation philosophy.

*Annual stock option awards* . Our practice is to make annual stock option awards as part of our overall performance program or upon promotion. The Compensation Committee believes that stock options provide management with a strong link to long-term corporate performance and the creation of stockholder value. We intend that the annual aggregate value of these awards will be set near competitive median levels for companies represented in the compensation data we review. As is the case when the amounts of base salary and initial equity awards are determined, a review of all components of the executive's compensation is conducted, including awards granted in prior periods, when determining annual equity awards to ensure that an executive's total compensation conforms to our overall philosophy and objectives.

*Restricted stock unit awards* . In the past we have made grants of RSUs to executives and certain non-executive employees to provide additional long-term incentive to build stockholder value. Because the shares underlying the RSUs have a defined value at the time the RSU grant is made, RSU grants are often perceived as having more immediate value than stock options, which have a less calculable value when granted. Because these awards are perceived to have more immediate value to the employee, they help ensure that certain key employees remain with the Company. However, the RSUs we grant generally cover fewer shares than the stock options we would grant for a similar purpose. The RSUs we grant typically vest 25% on the first anniversary of the date of grant and quarterly thereafter for the next three years. Executives have the option at the time of grant to defer the issuance of the shares underlying the RSUs beyond the date at which the RSU vests. This feature allows the individual to defer the payment of income taxes related to these shares until the shares underlying the RSU are issued. We did not grant any RSUs in 2018 or 2017.

#### *Retirement Plan*

We currently maintain a 401(k) retirement savings plan that allows eligible employees to defer a portion of their compensation, within limits prescribed by the Internal Revenue Code, on a pre-tax or after-tax basis through contributions to the plan. Our named executive officers are eligible to participate in the 401(k) plan on the same general terms as other full-time employees. Currently, we match contributions made by participants in the 401(k) plan up to a specified percentage, and these matching contributions are fully vested as of the date on which the contribution is made.

#### *Other Compensation*

We maintain broad-based benefits and perquisites that are offered to all employees, including health insurance, life and disability insurance and dental insurance. In particular circumstances, we also utilize cash signing bonuses when certain executives join us. Generally, such cash signing bonuses are contractually required to be repaid on a pro-rata basis to the Company if the employee recipient voluntarily terminates employment with us prior to the first anniversary of the date of hire. Whether a signing bonus is paid and the amount thereof is determined on a case-by-case basis under the specific hiring circumstances. For example, we will consider paying a signing bonus to compensate for amounts forfeited by an executive upon terminating prior employment, to assist with relocation expenses and/or to create additional incentive for an executive to join our Company in a position where there is high market demand. We also reimburse our CEO up to \$50,000 per year for costs related to housing.

#### *Termination Based Compensation*

*Severance* . Upon termination of employment, our executive officers are entitled to receive severance payments. In determining whether to approve, and setting the terms of, such severance arrangements, the Compensation Committee recognizes that executives, especially highly ranked executives, often face challenges securing new employment following termination. We have employment agreements that contain severance arrangements with our CEO and our 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 our 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 paid during the previous 12 months. 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 our 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 paid during the previous 12 months. In addition, all outstanding

unvested stock awards will vest immediately. Under the agreements with our other 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 our 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 paid during the previous 12 months. 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 paid during the previous 12 months. In addition, all outstanding unvested stock awards will vest immediately.

Additional details about these severance provisions, including definitions of "cause" and "good reason" can be found under "Potential Payments Upon Termination or Change of Control," below. We believe that our executives' severance packages are generally in line with severance packages offered to executives of the companies of similar size to us represented in the compensation data we reviewed.

*Acceleration of vesting of equity-based awards* . In addition to the severance provisions contained in the employment agreements with our CEO and our other executives, provisions of our Stock Incentive Plan allow our Board to grant stock-based awards to employees and executives that provide for the acceleration of vesting in the event of a "change of control" (as defined in the Plan). Currently, all of our outstanding equity-based awards include provisions that accelerate vesting of such awards in the event of a change of control. The Compensation Committee believes that these provisions are properly designed to promote stability during a change of control and enable our executives to focus on corporate objectives during a change of control, even if their employment may be subsequently terminated.

#### *Tax and Accounting Implications*

*Deductibility of executive compensation* . As part of its role, the Compensation Committee reviews and considers the deductibility of executive compensation under Section 162(m) of the Internal Revenue Code (the "Code"), which provides that the Company may not deduct compensation of more than \$1,000,000 that is paid to certain individuals. However, in certain situations, the Committee may approve compensation that will not meet these requirements in order to ensure competitive levels of total compensation for its executives.

*Accounting for stock-based compensation* . The Company accounts for stock-based compensation including its Stock Option Program, Long-Term Stock Grant Program, Restricted Stock Program and Stock Award Program in accordance with the requirements of FASB ASC Topic 718. The Compensation Committee considers the accounting impact of equity-based compensation when developing the Company's compensation strategy.

*The Role of Stockholder Say-on-Pay Votes* . We have provided our stockholders with the opportunity to cast an annual advisory vote on executive compensation through a "say-on-pay" proposal. At our 2018 Annual Meeting of Stockholders, over 90% of the votes cast on the say-on-pay proposal were voted in favor of the proposal. The Compensation Committee believes that this affirms stockholder support of our overall approach to executive compensation. Accordingly, the Compensation Committee did not materially change its approach following the 2018 Annual Meeting of Stockholders. The Compensation Committee will continue to consider the outcome of our say-on-pay votes when making future compensation decisions for our named executive officers.

## SUMMARY COMPENSATION TABLE

The Company has entered into compensation agreements with its executives. The terms of those agreements provide for benefits such as relocation reimbursement, severance payments and vesting acceleration of equity-based awards in the event of a change of control. The terms of these benefits are further discussed under the heading “Compensation Components” included herein. The following table provides information regarding the compensation of each of our named executive officers for each of the three fiscal years ended December 31, 2018, 2017 and 2016.

Name and Principal Position	Year	Salary (\$)	Bonus \$(1)	Stock Awards \$(2)	Option Awards \$(2)	All Other Compensation (\$)	Total (\$)
Vijay B. Samant	2018	591,220	260,000	—	120,987	(3) 57,147	1,029,354
President and Chief Executive Officer	2017	574,000	260,000	—	184,604	(4) 57,042	1,075,646
	2016	574,000	275,000	—	113,422	(5) 56,937	1,019,359
Larry R. Smith, Ph.D.	2018	312,100	70,000	—	52,644	6,877	441,621
Sr. Vice President, Research	2017	298,388	80,000	—	68,457	7,102	453,947
	2016	284,280	70,000	—	48,759	6,667	409,706
Mammen Mammen, Jr., M.D. (9)	2018	351,300	70,000	—	61,418	7,133	489,851
Sr. Vice President, Clinical	2017	328,987	95,000	—	68,457	7,070	499,514
Development	2016	301,790	70,000	—	48,759	6,725	427,274

- (1) Annual bonuses are granted after the completion of each calendar year at the Compensation Committee’s discretion, taking into account the Company’s performance against corporate goals and, except with respect to our CEO, each named executive officer’s performance against his or her individual goals.
- (2) These amounts represent the grant date fair value of equity-based awards granted by the Company during the years presented, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For a detailed discussion of our grant date fair value calculation methodology, including assumptions and estimates inherent therein, please refer to Note 1 to the financial statements contained in the Original Filing.
- (3) Included in this amount is \$10,822 related to 52,500 performance-based options for which the grant date fair value was determined assuming a 30% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$36,073. Also included in this amount is \$18,037 related to 52,500 performance-based options for which the grant date fair value was determined assuming a 50% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$36,073.
- (4) Included in this amount is \$12,447 related to 25,000 performance-based options for which the grant date fair value was determined assuming a 50% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$24,893. Also included in this amount is \$13,829 related to 25,000 performance-based options for which the grant date fair value was determined assuming a 50% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$27,658.
- (5) Included in this amount is \$16,182 related to 21,250 performance-based options for which the grant date fair value was determined assuming a 50% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$32,364. Also included in this amount is \$14,349 related to 21,250 performance-based options for which the grant date fair value was determined assuming a 40% probability of vesting. Assuming a 100% probability of vesting at the grant date, the grant date fair value would have been \$35,874.
- (6) Of the amount shown, \$50,000 represents housing costs, including \$39,724 in rent and utility payments for an apartment for Mr. Samant and \$8,368 for tax reimbursements.
- (7) Of the amount shown, \$50,000 represents housing costs, including \$42,814 in rent and utility payments for an apartment for Mr. Samant and \$4,159 for tax reimbursements.

- (8) Of the amount shown, \$50,000 represents housing costs, including \$ 39,800 in rent and utility payments for an apartment for Mr. Samant and \$8, 123 for tax reimbursements.
- (9) On February 19, 2019, Dr. Mammen was terminated in connection with the Company's decision to discontinue the clinical development of VL-2397.

## OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table provides details regarding outstanding stock-based awards for each of our named executive officers as of December 31, 2018.

	Option Awards			Stock Awards		
	Number of Securities Underlying Unexercised Options - Exercisable	Number of Securities Underlying Unexercised Options - Unexercisable(1)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested	Market Value of Shares or Units of Stock That Have Not Vested (\$)(2)
Vijay B. Samant	24,000	—	17.30	1/8/2019	1,875	2,213
	36,000	—	34.70	1/10/2020		
	45,000	—	21.40	1/6/2021		
	36,200	—	36.70	1/12/2022		
	48,200	—	33.10	1/10/2023		
	17,500	—	14.20	1/9/2024		
	35,938	1,562	10.70	1/18/2025		
	50,469	13,281	3.56	1/14/2026		
	86,875	68,125	2.31	1/11/2027		
	105,000	105,000	1.81	1/7/2028		
Larry R. Smith, Ph.D.	4,500	—	17.30	1/8/2019	437	516
	6,750	—	34.70	1/10/2020		
	9,000	—	21.40	1/6/2021		
	7,700	—	36.70	1/12/2022		
	9,715	—	33.10	1/10/2023		
	15,000	—	13.60	8/25/2023		
	13,500	—	14.20	1/9/2024		
	11,250	750	10.70	1/18/2025		
	17,188	7,812	3.56	1/14/2026		
	20,938	24,062	2.31	1/11/2027		
	3,750	6,250	2.36	5/24/2027		
	—	60,000	1.81	1/7/2028		
	Mammen Mammen, Jr., M.D.	2,000	—	33.80		
15,000		—	13.60	8/25/2023		
12,001		—	14.20	1/9/2024		
11,250		750	10.70	1/18/2025		
17,188		7,812	3.56	1/14/2026		
20,938		24,062	2.31	1/11/2027		
3,750		6,250	2.36	5/24/2027		
—		70,000	1.81	1/7/2028		

- (1) For those options granted on August 26, 2013 and expiring on August 25, 2023, the right to exercise vested 100% on the first anniversary of the date of grant. For those options granted on January 10, 2014 and expiring on January 9, 2024, the right to exercise vested one-third on the first anniversary of the date of grant, and the remaining rights vested quarterly over the remaining two years. For those options granted to Mr. Samant on January 10, 2014 and expiring on January 9, 2024, 17,500 shares subject to such options vested upon the achievement of specified performance goals and 32,500 shares subject to such options did not vest and were cancelled as of December 31, 2015 due to other specified performance goals not having been met

as of such date. For those options granted to Mr. Samant on January 19, 2015 and expiring on January 18, 2025, 12,500 shares subject to such options vested upon the achievement of specified performance goals and 12,500 shares subject to such options did not vest and were cancelled as of December 31, 2015 due to other specified performance goals not having been met as of such date. For those options granted to Mr. Samant on January 15, 2016 and expiring on January 14, 2026, 21,250 shares subject to such options vested upon the achievement of specified performance goals and 21,250 shares subject to such options did not vest and were cancelled as of December 31, 2016 due to other specified performance goals not having been met as of such date. For those options granted to Mr. Samant on January 12, 2017 and expiring on January 11, 2027, 25,000 shares subject to such options vested upon the achievement of specified achievement goals and 25,000 shares subject to such options did not vest and were cancelled as of December 31, 2017 due to other specified performance goals not having been met as of such date. For those options granted to Mr. Samant on January 8, 2018 and expiring on January 7, 2028, 105,000 shares subject to such options vested upon the achievement of specified performance goals. For all other options, the right to exercise vests 25% on the first anniversary of the date of grant, with the remaining rights vesting quarterly over the remaining three years.

- (2) The market value of the RSUs is determined by multiplying the number of shares underlying the RSUs by the closing price for our common stock of \$1.18 on December 31, 2018.

## POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE OF CONTROL

We have entered into employment agreements with our executive officers, which include provisions that entitle those executive officers to receive severance payments in specified cases upon termination without “cause” or resignation for “good reason”. Severance for our executive officers, other than our CEO, 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 paid during the previous 12 months. 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 paid during the previous 12 months. In addition, all outstanding unvested stock awards will vest immediately. Cause is defined as any one of the following: (i) sustained inadequate performance of the employee’s duties, (ii) a failure to perform the employee’s duties, other than a failure resulting from complete or partial incapacity due to physical or mental illness or impairment; (iii) gross misconduct or fraud, or (iv) a conviction of, or a plea of “guilty” or “no contest” to a felony. Good reason is defined as any one of the following: (i) a material reduction in authority or responsibility or significant demotion or (ii) a reduction in the employee’s base salary of more than 25%. To resign for good reason, an executive must notify us of his or her intention within 60 days after the occurrence of a condition constituting “good reason” and provide us with 30 days to cure the condition. In the event that our executives qualify for severance payments, the salary continuation payments will be made in a lump sum payment within 60 days following a qualifying termination.

We have entered into an employment agreement with our CEO, which provides for continued base salary payments at the then-current rate, including the payment of health insurance premiums, for a period of 18 months, plus a payment equal to one and one-half times his cash bonus paid during the previous 12 months, if his employment is terminated without “cause” or if he resigns for “good reason”. In addition, he 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. Cause is defined as any one of the following: (i) failure to perform the executive’s duties, (ii) gross misconduct, (iii) fraud or (iv) a conviction of, or a plea of “guilty” or “no contest” to, a felony. Good reason is defined as any one of the following: (i) a material reduction in authority or responsibility, (ii) removal of the direct reporting relationship with the Board, (iii) any material reduction in base compensation, or (iv) a material breach of the employment agreement by the Company. In the event that our CEO qualifies for severance payments, the salary continuation payments will be made on a semi-monthly basis, will be reduced dollar for dollar by any other compensation earned by him during the severance period, as an employee or consultant, and will be terminated if he enters into an employment or consulting agreement with a company which is primarily involved in research, development or commercialization of a method of delivery of naked DNA into humans or animals. In the event that the termination occurs within 24 months of a “change in control,” as defined in the agreement, our CEO’s employment agreement provides for 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 his cash bonus paid during the previous 12 months. In addition, all outstanding unvested stock awards held by our CEO will vest immediately.

All of the Company’s outstanding equity-based awards include provisions that accelerate vesting of such awards in the event of a change of control. A change of control is defined as the occurrence of either of the following events: (i) a change in the composition of the Board, as a result of which fewer than 50% of the incumbent directors are directors who either: (a) had been directors of the Company 24 months prior to such change; or (b) were elected, or nominated for election, to the Board of the Company 24 months prior to such change and who were still in office at the time of the election or nomination; or (ii) any person becomes, by acquisition or aggregation of securities, the beneficial owner of securities of the Company representing 50% or more of the combined voting power of the Company’s securities eligible to vote for the election of directors.

The following table provides details of potential payments which could occur upon termination of the named executive officers or in the event of a change of control of the Company assuming a triggering event occurred on December 31, 2018 .

Name	Cash Severance Payment\$(1)	Bonus Payment(\$)	Health Insurance Premiums\$(1)	Acceleration of Equity Awards\$(2)
Vijay B. Samant				
• Involuntary termination without cause	886,830	390,000	45,273	2,025
• Voluntary resignation for good reason	886,830	390,000	45,273	2,025
• Change in control	1,182,440	390,000	45,273	2,025
Larry R. Smith, Ph.D.				
• Involuntary termination without cause	312,100	80,000	25,962	472
• Voluntary resignation for good reason	312,100	80,000	25,962	472
• Change in control	468,150	80,000	25,962	472
Mammen Mammen, Jr., M.D. (3)				
• Involuntary termination without cause	351,300	95,000	2,234	405
• Voluntary resignation for good reason	351,300	95,000	2,234	405
• Change in control	526,950	95,000	2,234	405

- (1) In the cases of an involuntary termination without cause and voluntary resignation with good reason, the amounts assume no subsequent employment or consultancy by the executive during the applicable severance period.
- (2) The amounts shown reflect (a) for stock options, the excess, if any, of the closing price for our common stock of \$1.18 on December 31, 2018 over the exercise price of the stock options, multiplied by the number of shares underlying the options for which vesting is accelerated due to the specified termination and (b) for RSUs, the closing price for our common stock of \$1.18 on December 31, 2018, multiplied by the number of shares underlying the RSUs for which vesting is accelerated due to the specified termination.
- (3) On February 19, 2019, Dr. Mammen was terminated in connection with the Company's decision to discontinue the clinical development of VL-2397. In accordance with his employment agreement, Dr. Mammen received severance benefits consisting of a lump-sum payment equal to 12 months of base salary at the then-current rate, payment of health insurance premiums for 12 months and a payment equal to his cash bonus paid in the previous year. Dr. Mammen also received 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 exchange for the severance benefits, Dr. Mammen provided us with a general waiver and release of claims.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

**EQUITY COMPENSATION PLAN INFORMATION**

The following table provides certain information as of December 31, 2018, with respect to our equity compensation plan in effect on that date.

	Number of Securities to be Issued Upon Exercise of Outstanding Options and RSUs (a)	Weighted-Average Exercise Price of Outstanding Options (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders	1,927,440(1)	\$9.61	1,000,068

(1) Includes 31,884 RSUs.

**SECURITY OWNERSHIP**

**Security Ownership of Directors and Named Executive Officers**

The following table sets forth the beneficial ownership of the Company's common stock as of March 1, 2019, for each director of the Company, each executive named in the Summary Compensation Table herein, and all directors and executive officers of the Company as a group.

Name	Common Stock	Rights to Acquire Shares Within 60 Days of March 1, 2019	Total Stock and Stock Based Holdings	Percent of Total(1)
Vijay B. Samant	68,916	547,120	616,036	2.75%
Larry R. Smith, Ph.D.	15,946	151,166	167,112	*
Mammen P. Mammen, Jr., M.D.	9,249	146,001	155,250	*
R. Gordon Douglas, M.D.	10,828	64,330	75,158	*
Gary A. Lyons	7,828	46,624	54,452	*
George J. Morrow	2,734	30,590	33,324	*
Robert C. Merton, Ph.D.	95,451	47,874	143,325	*
Richard M. Beleson	2,207	27,018	29,225	*
Thomas E. Shenk, Ph.D.	752	17,937	18,689	*
All directors and executive officers as a group (10 persons)	223,585	1,214,650	1,438,235	6.24%

\* Less than 1%

(1) Percent of shares beneficially owned by any person is calculated by dividing the number of shares beneficially owned by that person as of March 1, 2019 (including any shares which that person has the right to acquire beneficial ownership of within 60 days of March 1, 2019), by the sum of the total number of shares outstanding as of March 1, 2019, and the number of shares which that person has the right to acquire beneficial ownership of within 60 days of March 1, 2019. Applicable percentages are based on 21,827,695 shares of our common stock outstanding as of March 1, 2019, adjusted as required.

## Security Ownership of Certain Beneficial Owners

The following table sets forth the beneficial ownership of the Company's Common Stock as of March 1, 2019, for each stockholder who was a beneficial owner of more than five percent of the outstanding shares of the Company's Common Stock on such date. The information below is based on filings by the beneficial owners with the SEC pursuant to section 13G under the Exchange Act as well as additional information provided to us by the stockholders as noted in the footnotes below. The Company is not aware of any other beneficial owner of more than five percent of the Company's Common Stock.

Name and Address	Common Stock	Percent of Total(1)
UBS Group AG (2) Bahnhofstrasse 45 P.O. Box CH-8098 Switzerland	2,320,987	10.6%
BVF Partners L.P. (3) 1 Sansome Street, 30th Floor San Francisco, CA 94104	2,278,598	9.9%
AnGes, Inc. (4) 4F, Saito Bio-Incubator, 7-7-15 Saito-Asagi Ibaraki, Osaka, 567-0085 Japan	2,058,528	9.4%
Armistice Capital, LLC (5) 510 Madison Avenue, 22nd Floor New York, NY 10022	1,815,795	8.3%
Sio Capital Management, LLC (6) 535 Fifth Avenue, Suite 910 New York, NY 10017	1,615,887	7.4%

- (1) Percent of shares beneficially owned by any stockholder is calculated by dividing the number of shares beneficially owned by the stockholder by the sum of the number of shares outstanding as of March 1, 2019. Applicable percentages are based on 21,827,695 shares of our common stock outstanding as of March 1, 2019.
- (2) Based on Schedule 13G filed by UBS Group AG ("UBS") on January 11, 2019. According to the Schedule 13G, 2,320,987 shares of our common stock were beneficially owned by UBS as of December 31, 2018.
- (3) Based on Amendment No. 1 to Schedule 13G filed by BVF Partners L.P. ("BVF") on February 1, 2019. According to the Schedule 13G, 2,278,598 shares of our common stock were beneficially owned by BVF as of December 31, 2018. This includes 992,750 shares of common stock issuable upon the exercise of certain warrants. It excludes 6,241,535 shares of common stock not issuable upon the exercise of certain warrants due to the warrant exercise limitation. These warrants may not be exercised if, after such exercise, BVF would beneficially own in the aggregate, as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, more than 9.99% of the number of shares of common stock then issued and outstanding.
- (4) Based on Schedule 13G filed by AnGes, Inc. ("AnGes") on August 10, 2016. According to the Schedule 13G, 2,058,528 shares of our common stock were beneficially owned by AnGes as of August 2, 2016.
- (5) Based on Amendment No. 3 to Schedule 13G filed by Armistice Capital, LLC ("Armistice") on January 17, 2019. According to the Schedule 13G, 1,815,795 shares of our common stock were beneficially owned by Armistice as of January 10, 2019.
- (6) Based on Schedule 13G filed by Sio Capital Management, LLC ("Sio") on February 14, 2019. According to the Schedule 13G, 1,615,887 shares of our common stock were beneficially owned by Sio as of December 31, 2018.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

**Independence of the Board of Directors**

Under the Nasdaq Stock Market (“Nasdaq”) listing standards, a majority of the members of a listed company’s board of directors must qualify as “independent,” as affirmatively determined by the board of directors. Our Board consults with our counsel to ensure that the Board’s determinations are consistent with all relevant securities and other laws and regulations regarding the definition of “independent,” including those set forth in pertinent listing standards of Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant transactions or relationships between each director, or any of their family members, and us, our senior management and our independent registered public accounting firm, our Board has affirmatively determined that all of our directors, except for Mr. Samant, our President and Chief Executive Officer, are independent directors within the meaning of the applicable Nasdaq listing standards.

**Certain Related-Party Transactions**

We have adopted a Related Person Transactions Policy to monitor transactions in which Vical and any of the following have an interest: a director, executive officer or other employee or a nominee to become a director of the Company; a security holder known by the Company to be the record or beneficial owner of more than 5% of any class of the Company’s voting securities; an “immediate family member” of any of the foregoing, which means any child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of such person, and any person (other than a tenant or employee) sharing the household of such person; and any firm, corporation or other entity in which any of the foregoing persons is an executive, partner or principal or holds a similar control position or in which such person directly or indirectly has a 5% or greater equity interest (collectively, “Related Persons”). The policy covers any transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which the Company is, was or will be a participant in which the amount involved exceeds the lesser of \$120,000 or one percent of the average of our total assets at year-end for the last two completed fiscal years and in which any Related Person had, has or will have a direct or indirect material interest (“Related Person Transactions”). Transactions involving compensation for services provided to the Company as an employee, consultant or director are not considered Related Person Transactions under this policy.

Under this policy, any proposed transaction that has been identified as a Related Person Transaction may be consummated or materially amended only following approval by the Audit Committee in accordance with the provisions of this policy. In the event that it is inappropriate for the Audit Committee to review the transaction for reasons of conflict of interest or otherwise, after taking into account possible recusals by Audit Committee members, then the Related Person Transaction shall be approved by another independent member of the Board. Our Related Person Transaction Policy can be found in the Corporate Governance section posted on our website at [www.vical.com](http://www.vical.com).

On November 10, 2017, one of the Company’s board members, Dr. Robert Merton, purchased 85,700 shares of the Company’s common stock at \$1.75 per share as part of the Company’s public offering of common stock.

There were no other Related Person Transactions since January 1, 2017 required to be reported in which the amount involved in the transaction exceeded the lesser of \$120,000 or one percent of the average of the Company’s total assets at year-end for the last two completed fiscal years.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES****Fees of Principal Accounting Firm**

The following table sets forth certain fees paid to Ernst & Young for the fiscal years ended December 31, 2018 and 2017:

	<u>Year Ended 12/31/18</u>	<u>Year Ended 12/31/17</u>
Audit Fees (1)	\$322,256	\$442,765
Audit-Related Fees	—	—
Tax Fees	—	—
All Other Fees (2)	1,960	1,995

(1) Represents aggregate fees for professional services rendered for the audit of the Company's annual consolidated financial statements and review of financial statements included in the Company's Form 10-Q filings, and other services that are normally provided in connection with statutory and regulatory filings or engagements.

(2) Includes fees for a subscription to an online accounting research library.

All fees described above were pre-approved by the Audit Committee of our Board.

**Pre-Approval Policies and Procedures**

The Audit Committee of our Board has adopted a policy and procedures for the pre-approval of audit and non-audit services rendered by our independent registered public accounting firm. The policy generally pre-approves specified services in the defined categories of audit services, tax services and other permissible non-audit services up to specified amounts. Pre-approval may also be given as part of the Audit Committee's approval of the scope of the engagement of the independent registered public accounting firm or on an individual case-by-case basis before the independent registered public accounting firm is engaged to provide each service. The pre-approval of services may be delegated to one or more of the Audit Committee's members, but the decision must be reported to the full Audit Committee at its next scheduled meeting.

The Audit Committee of our Board has determined that the rendering of non-audit services by Ernst & Young was compatible with maintaining the independence of Ernst & Young and all such services had been preapproved.

**PART IV**

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

**(b) Exhibits**

<u>Exhibit Number</u>	<u>Description of Document</u>
31.3	<a href="#"><u>Certification of Vijay B. Samant, Chief Executive 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</u></a>
31.4	<a href="#"><u>Certification of Anthony A. Ramos, 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</u></a>

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

**Date:** April 17, 2019

### VICAL INCORPORATED

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



