

**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, 2010

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: 001-14895

**AVI BioPharma, Inc.**

(Exact name of registrant as specified in its charter)

**Oregon**

(State or other jurisdiction of  
incorporation or organization)

**93-0797222**

(I.R.S. Employer  
Identification Number)

**3450 Monte Villa Parkway, Suite 101**

**Bothell, Washington**

(Address of principal executive offices)

**98021**

(Zip Code)

Registrant's telephone number, including area code: (425) 354-5038

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

<u>Title of Each Class</u>	<u>Name of Exchange on Which Registered</u>
Common Stock, \$0.0001 par value	The NASDAQ Stock Market LLC (The NASDAQ Global 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 Section 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 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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, 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  (Do not check if a smaller reporting company)

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2010 was approximately \$136,667,337.

The number of outstanding shares of the registrant's common stock as of the close of business on April 26, 2011 was 135,564,651.

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**DOCUMENTS INCORPORATED BY REFERENCE**

None.

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## EXPLANATORY NOTE

This Amendment No. 1 to our annual report on Form 10-K (filed with the Securities and Exchange Commission on March 15, 2011) is being filed to provide the information required by Part III of Form 10-K. Such information will also be included in our preliminary proxy statement to be filed with the Securities and Exchange Commission on or about May 6, 2011.

Except for the matters disclosed in Part III — Items 10 through 14, and Exhibits 31.1 and 31.2, which are filed herewith, this Amendment No. 1 does not modify, amend or update in any way the financial statements or any other items or disclosures contained in our annual report on Form 10-K (which continues to speak as of the date of the filing thereof).

This report contains forward-looking statements or incorporates by reference forward-looking statements. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other “forward-looking” information. These statements relate to our future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements. All forward-looking statements are based on information available to us on the date of this report and we will not update any of the forward-looking statements after the date of this report, except as required by law. Our actual results could differ materially from those discussed in our annual report. The forward-looking statements contained in this report, and other written and oral forward-looking statements made by us from time to time, are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in our annual report on Form 10-K filed with the Securities and Exchange Commission on March 15, 2011, including without limitation, Part I — Item 1A “Risk Factors” of such annual report.

**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance.**

**Board of Directors**

As of the date of this report, our board of directors is composed of seven directors. Our bylaws currently permit a maximum of seven directors. The shareholders or the board of directors may change from time to time the number of directors by amendment of the bylaws, but no decrease in the number of authorized director will have the effect of shortening the term of any incumbent director.

Pursuant to our articles of incorporation, when there are six or more positions on the board of directors, the positions are divided into two equal or nearly equal groups, denoted as Group I and Group II. In even years, shareholders elect directors to fill all Group I positions and in odd years, shareholders elect directors to fill all Group II positions. There is no cumulative voting for election of directors.

The following table sets forth the names of and other information about each of our directors.

	<u>Age</u>	<u>Director Since</u>	<u>Expiration Of Term (4)</u>	<u>Position(s) Held With AVI</u>
<b>Group II Directors:</b>				
M. Kathleen Behrens, Ph.D. (1)(3)	58	2009	2011	Director
Anthony Chase (2)(3)	56	2010	2011	Director
John Hodgman (1)(2)	56	2004	2011	Director
<b>Group I Directors:</b>				
Christopher Garabedian	44	2010	2012	President, CEO and Director
William Goolsbee (1)(2)	57	2007	2012	Chairman of the Board
Gil Price, M.D. (2)(3)	55	2007	2012	Director
Hans Wigzell, M.D., Ph.D.	72	2010	2012	Director

- (1) Member of the compensation committee.
- (2) Member of the audit committee.
- (3) Member of the nominating and corporate governance committee.
- (4) The terms of Group II Directors expire as of the date of the 2011 annual meeting, and the terms of Group I Directors expire as of the date of the 2012 annual meeting.

Directors for a group whose terms expire at a given annual meeting will be up for re-election for two-year terms at that meeting. Each director's term will continue until the election and qualification of such director's successor, or such director's earlier death, resignation or removal. Any increase or decrease in the number of directors will be distributed among the two groups so that, as nearly as possible, each group will consist of one-half of the directors. This classification of our board of directors may have the effect of delaying or preventing changes in control of management. There are no family relationships among any of our directors or executive officers.

**Biographical Information**

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**M. Kathleen Behrens, Ph.D.**, has served as a member of our board of directors since March 2009. She also serves as a member of the nominating and corporate governance committee and the compensation committee. Dr. Behrens served as a member of the President's Council of Advisors on Science and Technology ("PCAST") from 2001 to early 2009 and as chairwoman of PCAST's Subcommittee on Personalized Medicine. She has served as a public-market biotechnology securities analyst as well as venture capitalist focusing on healthcare, technology and related investments. She was instrumental in the founding of several biotechnology companies including Protein Design Labs, Inc. and COR Therapeutics, Inc. She worked for Robertson Stephens & Co. from 1983 through 1996, serving as a general partner and managing director. Dr. Behrens continued in her capacity as a general partner for selected venture funds for RS Investments from 1996 through 2009, after management led a buyout of that firm from Bank of America. From 1997 to 2005, she was a director of the Board on Science, Technology and Economic Policy for the National Research Council, and from 1993 to 2000 she was a director, president, and chairwoman of the National Venture Capital Association. Dr. Behrens is also a director of Amylin Pharmaceuticals, Inc. and, in the past five years, has served as a director of Abgenix, Inc. Our nominating and corporate governance committee believes that Dr. Behrens' significant experience in the financial services and biotechnology sectors, as well as in healthcare policy, qualifies her for service as a member of the board of directors. Dr. Behrens holds a B.S. in Biology and a Ph.D. in Microbiology from the University of California, Davis.

**Anthony Chase**, has served as a member of our board of director since April 2010. He also serves as a member of the audit committee and the nominating and corporate governance committee. Mr. Chase serves as chairman of ChaseSource, L.P., a position he has held since October 2006, and ChaseSource Real Estate Services, L.P., a position he has held since January 2008. Previously, he was Chairman and Chief Executive Officer of ChaseCom, L.P. from January 1997 to December 2007, when ChaseCom, L.P. was acquired by AT&T. Mr. Chase is a tenured Professor at the University of Houston Law Center where he began teaching in 1990. Mr. Chase is a member of the American Bar Association and State Bar of Texas. Mr. Chase is a director of Western Gas Partners (NYSE) and, in the past five years, has served as a director of the Cornell Companies, Inc. He is a member of the Council on Foreign Relations. Our nominating and corporate governance committee believes that Mr. Chase's experience in leadership positions in public companies qualifies him for service as a member of the board of directors. Mr. Chase received an A.B., with honors, from Harvard College, received a J.D. from Harvard Law School, and received an M.B.A. from Harvard Business School.

**Christopher Garabedian**, has been a member of our board of directors since June 2010 and our President and Chief Executive Officer since January 2011. Mr. Garabedian served as Vice President of Corporate Strategy for Celgene Corporation, a publicly-traded integrated global biopharmaceutical company, from July 2007 to December 2010, where he was responsible for assessing all potential business development transactions. From November 2005 to June 2007, Mr. Garabedian served as an independent consultant to early-stage biopharmaceutical companies. From 1997 to 1998 and from 1999 to November 2005, Mr. Garabedian worked at Gilead Sciences, Inc., a publicly-traded biopharmaceutical company, where he served in a number of global leadership roles, including as Vice President of Corporate Development, Vice President of Marketing, and Vice President of Medical Affairs. While at Gilead Sciences, Mr. Garabedian's responsibilities included managing corporate development initiatives, including portfolio review and planning, mergers and acquisitions and in-licensing activities, and leading four global product launches. Mr. Garabedian also held various commercial roles at COR Therapeutics, Inc. from 1998 to 1999 and at Abbott Laboratories from 1994 to 1997. He started his biopharmaceutical career as a consultant with Migliara/Kaplan Associates from 1991 to 1994. Our corporate governance and nominating committee believes that Mr. Garabedian's qualifications for membership on the board of directors include his previous experience serving in leadership positions within the biopharmaceutical industry and his position as our President and Chief Executive Officer. Mr. Garabedian's corporate vision and operational knowledge provide strategic guidance to our management team and our board of directors. Mr. Garabedian received his B.S. in marketing from the University of Maryland.

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**William Goolsbee**, has served as a member of our board of directors since October 2007 and as chairman of the board of directors since June 2010. He also serves as the chairman of the compensation committee and as a member of the audit committee. Mr. Goolsbee was founder, chairman and Chief Executive Officer of Horizon Medical Inc. from 1987 until its acquisition by a unit of UBS Private Equity in 2002. Mr. Goolsbee was a founding director of ImmunoTherapy Corporation in 1993, becoming chairman of the board in 1995, a position he held until overseeing the successful acquisition of ImmunoTherapy by us in 1998. His experience prior to 1987 includes a series of increasingly responsible executive positions with CooperVision Inc. and Cooper Laboratories Inc. Our nominating and corporate governance committee believes that Mr. Goolsbee's 30-year career in the medical device and biopharmaceutical industries qualifies him for service as a member of the board of directors. Mr. Goolsbee holds a B.A. degree from the University of California at Santa Barbara. Mr. Goolsbee serves as chairman of privately held BMG Pharma LLC, a product development and licensing company.

**John Hodgman**, has served as a member of our board of directors since March 2004. He also serves as the chairman and financial expert of the audit committee and as a member of the compensation committee. In the past five years, Mr. Hodgman has also served as a director of Inflazyme Pharmaceuticals, Ltd., Alpha Innotech Corporation and Cygnus, Inc. He has served as the Senior Vice President of Finance and Chief Financial Officer of InterMune, Inc., a biotechnology company, since August 2006. He served as the Chairman of Cygnus, Inc., a biopharmaceutical company, from 1999 to 2008, and as President and Chief Executive Officer of that company between 1998 and 2006. Mr. Hodgman joined Cygnus in 1994 as Vice President of Finance and Chief Financial Officer, and between 1995 and 1998, he also served as president of Cygnus Diagnostics. He was President and Chief Executive Officer of Aerogen, Inc., a biopharmaceutical company, from June 2005 to October 2005 when that company was sold to Nektar, Inc. Mr. Hodgman holds a B.S. degree from Brigham Young University and an M.B.A. from the University of Utah. Mr. Hodgman is a director of Immersion Corporation. Our nominating and corporate governance committee believes that Mr. Hodgman's significant executive-level experience as a finance executive with biotechnology and biopharmaceutical companies qualifies him for service as a member of the board of directors.

**Gil Price, M.D.**, has served as a member of our board of directors since October 2007. He also serves as the chairman of the nominating and corporate governance committee and as a member of the audit committee. Dr. Price is a clinical physician trained in internal medicine with a long-standing interest in drug development, adverse drug reactions, drug utilization and regulation. Since 2002, he has been the Chief Executive Officer and Chief Medical Officer of Drug Safety Solutions, a provider of solutions for clinical and drug safety operations. From 1997 to 2002, Dr. Price was the director of clinical development for oncology at MedImmune, Inc., the biologics subsidiary of AstraZeneca. Prior to joining MedImmune, Dr. Price worked in the contract research organization sector. Dr. Price began his pharmaceutical career at GlaxoSmithKline Inc., where he worked for nearly nine years on both the commercial and research sides of that company. Dr. Price is a member of the American Medical Association, the Academy of Pharmaceutical Physicians and a past member of the American Society for Microbiology. Our nominating and corporate governance committee believes that Dr. Price's experience in the clinical, research and commercial sectors in the fields of medicine and pharmaceuticals qualifies him for service as a member of the board of directors. Dr. Price received a B.A. from the University of Rio Grande and a M.D. from the University of Santiago.

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*Hans Wigzell, M.D., Ph.D.*, has served as a member of our board of directors since June 2010. In the past five years, Dr. Wigzell has served as a director of Probi AB and Diamyd Medical AB and currently serves as a director of RaySearch Laboratories AB, Biovitrum AB, and Intercell AG. Previously he was the president of the Karolinska Institute, a medical university, from 1995 to 2003, and was general director of the National Bacteriological Laboratory in Stockholm from 1987 to 1993. Dr. Wigzell is chairman of the board of the Stockholm School of Entrepreneurship. He is an elected member of several national academies, including the Swedish Royal Engineering Academy, Sweden; the Royal Academy of Science, Sweden; the Danish Academy of Arts and Letters; the American Academy of Arts and Sciences; the Finnish Science Society; and the European Molecular Biology Organization. In addition to serving as president of the Karolinska Institute, his academic career includes being Chairman, Nobel Prize Committee, Karolinska Institute and Distinguished External Advisory Professor, Ehime University, Japan. Additionally, Dr. Wigzell was appointed Chairman of the Nobel Assembly in 2000. Our nominating and corporate governance committee believes that Dr. Wigzell's experience serving in leadership roles in various scientific and biotechnology institutions and companies in countries around the world qualifies him to serve as a member of the board of directors. He holds an M.D. and Ph.D. degree from the Karolinska Institute in Stockholm and he has received honorary doctors degrees at University "Tor Vergata" in Rome, Italy and Turku University in Finland.

### **Board Leadership Structure**

The positions of Chief Executive Officer and Non-Executive Chairman of the Board are held by two different individuals (Mr. Garabedian and Mr. Goolsbee, respectively). Our Non-Executive Chairman has many of the duties and responsibilities that a "lead independent director" might have and, therefore, the board of directors has determined not to designate a separate "lead independent director." This current structure allows our Chief Executive Officer to focus on our strategic direction and our day-to-day business while our Non-Executive Chairman provides guidance to the Chief Executive Officer and leads the board in its fundamental role of providing advice to, and independent oversight of, management. The board of directors recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position given our stage of development, as well as the commitment required to serve as our Non-Executive Chairman. The board of directors believes that this leadership structure is appropriate because it allows us to speak externally to our various constituents, as well as internally to our officers and employees, on a unified and consistent basis, and fosters clear accountability and effective decision-making. At the same time, our board structure incorporates appropriate board independence and programs for risk management oversight of our overall operations, including our compensation programs. The board of directors will continue to assess the appropriateness of this structure as part of the board of directors' broader succession planning process.

We have been, and continue to be, a strong advocate of the independence of the board of directors and have put into place measures to see that our directors provide independent oversight. The board of directors believes that it also has established substantial independent oversight of management. For example, five of seven of our current directors are independent under the NASDAQ guidelines. In addition, each of the board of directors' three standing committees is currently comprised solely of independent directors. Each of the standing committees operates under a written charter adopted by the board of directors. Also, our non-management directors meet in executive session periodically without management in attendance. One result

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of this focus on director independence is that oversight of critical matters, such as the integrity of our financial statements, employee compensation, including compensation of the executive officers, the selection of directors and the evaluation of the board of directors and its committees is entrusted to independent directors.

### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than 10% of a registered class of our equity securities, to file reports of ownership of, and transactions in, our securities with the Securities and Exchange Commission and NASDAQ. Such directors, executive officers, and 10% shareholders are also required to furnish us with copies of all Section 16(a) forms that they file.

Based solely on a review of the copies of such forms received by us, or written representations from certain reporting persons, we believe that during 2010, our directors, executive officers, and 10% shareholders complied with all Section 16(a) filing requirements applicable to them.

### **Code of Conduct**

We have adopted a Code of Business Conduct and Ethics (the "Code of Conduct"). The Code of Conduct applies to all directors and employees, including all officers, managers and supervisors, and is intended to better ensure full, fair, accurate, timely and understandable disclosures in our public documents and reports, compliance with applicable laws, prompt internal reporting of violations of these standards and accountability for adherence to standards. We have contracted with Ethicspoint to provide a method for employees and others to report violations of the Code of Conduct anonymously. A copy of the Code of Conduct is posted on our website at [www.avibio.com](http://www.avibio.com).

### **Shareholder Proposals and Shareholder Nominations of Directors**

We have not made any material changes to the procedures by which our shareholders may recommend nominees to our board of directors since we last disclosed the procedures by which shareholders may nominate director candidates under the caption "Shareholder Proposals and Shareholder Nominations of Directors" in our proxy statement for the 2010 annual meeting of shareholders filed with the SEC on May 4, 2010.

### **Board of Directors and Committee Meetings**

During 2010, our board of directors met 21 times and acted by unanimous written consent twice. During 2010, our audit committee met five times, our compensation committee met eight times, and our nominating and corporate governance committee met four times. All of our directors attended more than 75% of the aggregate of all meetings of the board of directors and of the committees on which such director served. Although we do not have a formal policy regarding attendance by members of the board of directors at our annual meeting of shareholders, our directors are encouraged to attend and six of our current directors attended the 2010 annual meeting of shareholders.

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

During 2010, our board of directors had three standing committees: the audit committee; the compensation committee (which has delegated certain responsibilities to the new employee option committee as set forth in the "Executive Compensation — Compensation Discussion and Analysis — Equity Incentive Plan Compensation" section later in this report); and the nominating and corporate governance committee. All of the committee charters, as adopted by our board of directors, are available on our website at [www.avibio.com](http://www.avibio.com) under "Investor Relations — Corporate Governance." The functions performed by each committee and the members of each committee are described below.

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***Audit Committee***

The audit committee reviews with our independent registered public accounting firm the scope, results, and costs of the annual audit and our accounting policies and financial reporting. Our audit committee (i) has direct responsibility for the appointment, compensation, retention, and oversight of our independent registered public accounting firm, (ii) discusses with our auditors their independence from management, (iii) reviews the scope of the independent annual audit, (iv) establishes procedures for handling complaints regarding our accounting practices, (v) oversees the annual and quarterly financial reporting process, (vi) has authority to engage any independent advisors it deems necessary to carry out its duties, and (iv) has appropriate funding to engage any necessary outside advisors. A full description of the responsibilities and duties of the audit committee is contained in the audit committee charter. The current members of the audit committee are John Hodgman (Chairman), Anthony Chase, William Goolsbee and Gil Price. M. Kathleen Behrens was a member of the audit committee until June 2010 and Christopher Garabedian was a member of the audit committee until December 2010, when he stepped down from the audit committee in connection with his appointment as President and Chief Executive Officer. The board of directors has determined that Mr. Hodgman, the chairman of the audit committee, is an “audit committee financial expert” as that term is defined in Item 407(d)(5) of Regulation S-K promulgated by the SEC. The audit committee report is set forth above. The audit committee charter requires the committee to review and assess the charter’s adequacy annually.

***Compensation Committee***

The compensation committee oversees our compensation and benefits practices and programs, as more fully described in the “Executive Compensation — Compensation Discussion and Analysis” section later in this report. The current members of the compensation committee are William Goolsbee (Chairman), M. Kathleen Behrens and John Hodgman. Michael Casey and K. Michael Forrest were members of the compensation committee until June 2010 and April 2010, respectively. Christopher Garabedian was the chairman and a member of the compensation committee until December 2010, when he stepped down from the compensation committee in connection with his appointment as President and Chief Executive Officer. The Compensation Committee Report is set forth in the “Executive Compensation — Compensation Committee Report” section later in this report.

***Nominating and Corporate Governance Committee***

The nominating and corporate governance committee reviews candidates and makes recommendations of nominees for the board of directors. The nominating and corporate governance committee also is responsible for considering and making recommendations to the board of directors concerning the appropriate size, functions and needs of the board of directions and to ensure compliance with the Code of Conduct. As part of its duties, the nominating and corporate governance committee will consider individuals who are properly proposed by shareholders to serve on the board of directors in accordance with laws and regulations established by the SEC and The NASDAQ Global Market, our bylaws and applicable corporation law, and make recommendations to the board of directors regarding such individuals based on the established criteria for members of our board. The nominating and corporate governance committee may consider in the future whether our company should adopt a more formal policy regarding shareholder nominations. The current members of the nominating and corporate governance committee are Gil Price (Chairman), M. Kathleen Behrens and Anthony Chase. Michael Casey and William Goolsbee were members of the nominating and corporate governance committee until June 2010.

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The board of directors believes that the board, as a whole, should possess a combination of skills, professional experience, and diversity of backgrounds necessary to oversee our business. In addition, the board of directors believes that there are certain attributes that every director should possess, as reflected in the board's membership criteria. Accordingly, the board and the nominating and corporate governance committee consider the qualifications of directors and director candidates individually and in the broader context of the board's overall composition and our current and future needs. The nominating and corporate governance committee has not established specific minimum age, education, years of business experience or specific types of skills for potential candidates, but, in general, expects qualified candidates will have ample experience and a proven record of business success and leadership. In general, each director will have the highest personal and professional ethics, integrity and values and will consistently exercise sound and objective business judgment. It is expected that the board of directors as a whole will have individuals with significant appropriate senior management and leadership experience, a long-term and strategic perspective, the ability to advance constructive debate, and a global perspective. These qualifications and attributes are not the only factors the nominating and corporate governance committee will consider in evaluating a candidate for nomination to the board of directors, and the nominating and corporate governance committee may reevaluate these qualifications and attributes at any time.

The nominating and corporate governance committee is responsible for developing and recommending board membership criteria to the board for approval. The criteria include the candidate's business experience, qualifications, attributes and skills relevant to the management and oversight of our business, independence, judgment and integrity, the ability to commit sufficient time and attention to board activities, and any potential conflicts with our business and interests. In addition, the board and the nominating and corporate governance committee annually evaluate the composition of the board to assess the skills and experience that are currently represented on the board, as well as the skills and experience that the board will find valuable in the future, given our current situation and strategic plans. While not maintaining a specific policy on board diversity requirements, the board and the nominating and corporate governance committee believe that diversity is an important factor in determining the composition of the board and, therefore, seek a variety of occupational and personal backgrounds on the board in order to obtain a range of viewpoints and perspectives and to enhance the diversity of the board. This annual evaluation of the board's composition enables the board and the nominating and corporate governance committee to update the skills and experience they seek in the board as a whole, and in individual directors, as our needs evolve and change over time and to assess the effectiveness of efforts at pursuing diversity. In identifying director candidates from time to time, the board and the nominating and corporate governance committee may identify specific skills and experience that they believe we should seek in order to constitute a balanced and effective board.

Except as set forth above, the nominating and corporate governance committee does not have a formal process for identifying and evaluating nominees for director. The nominating and corporate governance committee does not currently engage any third party director search firms but may do so in the future if it deems appropriate and in our best interests. These issues will be considered by the nominating and corporate governance committee in due course, and, if appropriate, the nominating and corporate governance committee will make a recommendation to the board of directors addressing the nomination process.

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

The board of directors welcomes and encourages shareholders to share their thoughts regarding our company. While the board of directors encourages such communication, for a variety of reasons, including compliance with securities laws, fiduciary duties of the directors, and good business practices relating to corporate communications, our preference is that shareholders communicate with the board of directors in compliance with our communications policy. Our communications policy, as adopted by the board of directors, provides that all communications should be in writing and directed to the attention of our Investor

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Relations Department at AVI BioPharma, Inc., 3450 Monte Villa Parkway, Suite 101, Bothell, Washington, 98021. Our Investor Relations Department will review the communication, and if the communication is determined to be relevant to our operations, policies, or procedures (and not vulgar, threatening, or of an inappropriate nature not relating to our business), Investor Relations will then distribute a copy of the communication to the chairman of the board, the chairman of the audit committee and our internal and outside counsel. Based on the input and decision of these persons, along with the entire board of directors if it is deemed necessary, we, through our Investor Relations Department, will respond to the communication.

### Executive Officers

The following table sets forth certain information with respect to the executive officers of our Company:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Christopher Garabedian	44	President, Chief Executive Officer and Group I Director
J. David Boyle II	57	Senior Vice President and Chief Financial Officer
Graham Johnson, Ph.D.	60	Senior Vice President of Preclinical Development and Research
Peter Linsley, Ph.D.	59	Senior Vice President and Chief Scientific Officer
Paul Medeiros	49	Senior Vice President of Business Development and Chief Business Officer
Stephen Shrewsbury, M.D.	54	Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer
Effie Toshav	37	Senior Vice President, General Counsel and Secretary

**J. David Boyle II**, has served as our Senior Vice President and Chief Financial Officer since August 2008 and served as our Interim Chief Executive Officer and President from April 2010 until December 2010. Mr. Boyle also previously served as our Secretary from September 2008 to April 2010. In the five years prior to his appointment as Senior Vice President and Chief Financial Officer, Mr. Boyle worked for both XOMA Ltd., a biopharmaceutical company in the field of therapeutic antibody discovery and development, and Polycom, Inc., a worldwide high technology communications company. Mr. Boyle served as Chief Financial Officer of XOMA Ltd. from July 2005 to August 2008. Prior to his position as Chief Financial Officer, Mr. Boyle served as Vice President, Financial Operations of XOMA Ltd. from January 2005 to July 2005. Mr. Boyle joined XOMA Ltd. in January 2005 from Polycom, Inc. where he served from March 2002 to December 2004, most recently, as Vice President, Finance. Mr. Boyle also brings to our company extensive global financial leadership experience in the pharmaceutical industry through previous senior leadership positions. Prior to his employment with Polycom, Inc., Mr. Boyle worked for Salix Pharmaceuticals, Ltd. in the U.S. and for Ares Serono Group both in the U.S. and Switzerland. Mr. Boyle holds a B.A. degree from Catholic University.

**Graham Johnson, Ph.D.**, has served as Senior Vice President of Preclinical Development and Research since August 2010. Prior to joining us, Dr. Johnson held a number of senior leadership positions in both biotech and large pharmaceutical companies and in pharmaceutical consulting. These roles included President of NuPharmAdvise LLC, Chief Research Officer for Rib-X Pharmaceuticals, Vice President of Bristol-Myers Squibb Discovery Chemistry for Connecticut and Canada, and Director of Neuroscience Chemistry for Parke-Davis Pharmaceuticals. Over his 32 year career, Dr. Johnson has worked in such diverse areas as neuroscience, infectious and genitourinary diseases and inflammation. Dr. Johnson is an inventor on more than 54 patents and has co-authored more than 60 peer-reviewed publications. He was a permanent

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steering committee member and scientific advisor for the Spinomuscular Atrophy Project, an NINDS-sponsored collaborative program to accelerate therapeutics development for spinal muscular atrophy. He is currently an Independent Observer for the European Union's Innovative Medicine Initiative and sits on the scientific advisory board for Galenea Corporation. Dr. Johnson completed his undergraduate studies and earned a Ph.D. from Heriot-Watt University, Edinburgh, and was then awarded a Fulbright Senior Fellowship for postdoctoral study in the U.S., where he joined Professor Sir Jack Baldwin's research group at the Massachusetts Institute of Technology. This was followed by two years of additional postdoctoral study with Professor Sir Derek Barton, first at Imperial College, London, and then at the Research Institute for Medicine and Chemistry in Cambridge, Massachusetts. Dr. Johnson will cease to be an employee and officer of our company effective May 13, 2011.

**Peter Linsley, Ph.D.**, has served as our Senior Vice President and Chief Scientific Officer since May 2011. Dr. Linsley was Chief Scientific Officer of Regulus Therapeutics Inc. from February 2008 to October 2010. Regulus is a biopharmaceutical company created as a joint venture of Alnylam Pharmaceuticals, Inc., and Isis Pharmaceuticals, Inc., to focus on the discovery and development of drug candidates that target microRNAs. While at Regulus, Dr. Linsley led the company's research and development efforts and built a scientific base for some of the first strategic transactions in the microRNA therapeutic arena. From July 2001 to January 2008, he was Executive Director of Cancer Biology at Merck Research Laboratories, where he led efforts to implement RNA interference technologies that culminated in Merck's 2007 acquisition of Sirna Therapeutics, Inc. Dr. Linsley originally joined Merck in 2001 when the company acquired Rosetta Inpharmatics, LLC. Dr. Linsley joined Rosetta in September 1997 and held a variety of positions, including Vice President of Research and Development. Prior to Rosetta, Dr. Linsley was at Bristol-Myers Squibb from September 1983 to April 1997. While at Bristol-Myers Squibb, he held several positions, including Director of Immunology, and co-discovered the co-stimulatory pathway, a discovery that yielded the immunomodulatory drugs abatacept (Orencia) and belatacept and, most recently, the anticancer drug ipilimumab (Yervoy). Dr. Linsley earned his bachelor's degree in Biology from Auburn University, where he graduated magna cum laude, and earned his Ph.D. at the Molecular Biology Institute of the University of California, Los Angeles. Dr. Linsley conducted postdoctoral research in the department of Genetics at the Hospital for Sick Children in Toronto. Dr. Linsley has participated on the editorial boards of several scientific journals, including the *Journal of Immunology*, and has published more than 200 scientific articles and has led discoveries that are protected by more than 35 issued U.S. patents.

**Paul Medeiros**, has served as Senior Vice President of Business Development and Chief Business Officer since May 2009, and served as Secretary from April 2010 to May 2011. In the five years prior to his appointment as our Senior Vice President of Business Development and Chief Business Officer, Mr. Medeiros worked for Schering-Plough, most recently as Vice President, Global Licensing and Strategic Alliances, where he led worldwide specialty product licensing and strategic partnering initiatives. Mr. Medeiros joined Schering-Plough in 1996 as Marketing Planning Director, and subsequently held senior positions of increasing responsibility in marketing and business development. Prior to Schering-Plough, Mr. Medeiros was employed by Merck & Company, where he held positions in field sales, new product planning and worldwide human health marketing. Mr. Medeiros holds an A.B. with honors from Brown University and an M.B.A. from Columbia Business School. He is a member of the Licensing Executives Society and is a Certified Licensing Professional™. Mr. Medeiros will cease to be an employee and officer of our company effective June 1, 2011.

**Stephen Shrewsbury, M.D.**, has served as our Chief Medical Officer and Senior Vice President of Preclinical, Clinical and Regulatory Affairs since January 2009. In the five years prior to joining our company, Dr. Shrewsbury worked as a consultant to companies in the pharmaceutical industry from August

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2008 to January 2009. Prior to his work as a consultant, Dr. Shrewsbury served as Chief Medical Officer and Senior Vice President, Clinical Development, Medical and Regulatory Affairs of Adamas Pharmaceuticals Inc., a clinical stage pharmaceutical company, from March 2008 to August 2008. He joined Adamas Pharmaceuticals Inc. in March 2008 from MAP Pharmaceuticals Inc., a biopharmaceutical company, where he served from February 2005 to March 2008, most recently as Chief Medical Officer. Prior to his employment with MAP Pharmaceuticals, Inc., Dr. Shrewsbury worked as Senior Director of Clinical Development of Chiron Corporation from July 2002 until February 2005. Prior to joining Chiron, Dr. Shrewsbury held several senior positions at GlaxoSmithKline both in the UK and United States from 1993 until 2002. Dr. Shrewsbury holds a Bachelor of Medicine and a Bachelor of Surgery degree from the University of Liverpool, UK.

*Effie Toshav*, has served as Senior Vice President and General Counsel since January 2011 and has served as Secretary since May 2011. Prior to joining us, Ms. Toshav was an attorney at the law firm of Wilson Sonsini Goodrich & Rosati from August 2006 to December 2010, most recently as a partner in the firm's life sciences practice where she counseled private and public companies on a variety of legal and business issues. From June 2004 to June 2006, she was general counsel of GlycoFi, a biotechnology company specializing in protein-based therapeutics, and had responsibility for legal and general corporate matters, the structure and execution of strategic alliances with major pharmaceutical companies and the management of the company's extensive intellectual property portfolio. Ms. Toshav also played a significant role in the \$400 million sale of GlycoFi to Merck in June 2006. Prior to GlycoFi, Ms. Toshav was senior corporate counsel at Protein Design Labs, predecessor of Facet Biotech. She received a B.A. in political science from Stanford University and a J.D. from Cornell Law School.

## **Item 11. Executive Compensation.**

### **Compensation Discussion and Analysis**

#### ***Introduction***

Throughout this section of this report, the individuals who served as our Chief Executive Officer and Chief Financial Officer during 2010, as well as the other individuals included in the Summary Compensation Table in this report, are referred to as the "named executive officers."

#### ***Compensation Philosophy and Objectives***

We are a biopharmaceutical company developing products in the growing field of RNA therapeutics. Current applications of our technology platform include clinical trials for genetic diseases (Duchenne muscular dystrophy), and earlier programs in infectious diseases (Ebola and Marburg viruses), H1N1 and other early discovery targets. We operate in a highly complex business environment and believe that a competitive compensation program is an important tool to help attract, retain, recognize and reward the talented employees we need to achieve our mission and deliver value to our shareholders.

The objective of our compensation policies and programs is to attract and retain well qualified senior executive management, to motivate their performance toward clearly defined goals, and to align their long term interests with those of our shareholders. We seek, and have sought, to reward and to provide incentives to named executive officers for their performance and delivery against agreed goals. Over the past few years,

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we have seen significantly increased demand for executives with industry-specific skills and experience and a highly competitive market for such executives. Additionally, given the competitive nature of our industry, the small size of our company relative to certain other members of our industry and the fact that there was a doubt about our ability to secure the funding needed to continue our research and development programs in 2010 at the time certain changes in management were made, we faced significant challenges in recruiting senior members of our management team. Thus, in 2010 the attraction and retention of executives was one of the key purposes of our executive compensation program and we expect that it will continue to be so in 2011 and beyond.

In addition, our compensation committee believes that maintaining and improving the quality and skills of our management and appropriately incentivizing their performance are critical factors affecting our shareholders' realization of long-term value. We intend that total compensation and each of its components, including base salary, incentive cash compensation, equity compensation, benefits and perquisites be competitive in the biopharmaceutical marketplace for suitable talent and in accord with our short and long term goals. While base compensation, benefits and perquisites are primarily a factor of being competitive in the biopharmaceutical marketplace for employees, incentive compensation is primarily merit based, with actual compensation for named executive officers other than the Chief Executive Officer a function of the achievement of defined and agreed corporate and individual goals. With respect to our Chief Executive Officer, 100% of the goals are tied to corporate objectives to reflect the fact that our Chief Executive Officer makes strategic decisions that influence us as a whole and thus, it is more appropriate to reward performance against corporate objectives.

Our executive compensation program also includes a significant pay-for-performance component. In that respect, the compensation program is designed to reward the named executive officers for meeting specific goals that are established and reviewed by the compensation committee for each named executive officer and for our company as a whole. In 2010, the compensation committee, the board and our then-current Chief Executive Officer agreed and set performance goals for each named executive officer and our company as a whole. Following the completion of 2010, the compensation committee, with input from both Mr. Boyle and Mr. Garabedian, assessed the degree to which the corporate goals were met and how each named executive officer had performed with respect to these goals. The compensation committee made an independent assessment with respect to Mr. Boyle's performance as Interim President and Chief Executive Officer.

The at-risk component of the compensation package for each named executive officer, which includes a targeted cash bonus and long-term equity incentives, is determined in large part on the basis of how that named executive officer performed in meeting his or her goals. Compensation decisions are also based on market factors that require us to remain competitive in our compensation package in order to attract and retain qualified individuals.

In addition to the foregoing, the following executive compensation principles guided the compensation committee during 2010 in fulfilling its roles and responsibilities:

- compensation levels and opportunities should be sufficiently competitive to facilitate recruitment and retention of experienced executives in our highly competitive talent market;
- compensation should reinforce our business strategy by integrating and communicating key metrics and operational performance objectives and by emphasizing incentives in the total compensation mix;

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- compensation programs should align executives' long-term financial interests with those of the shareholders by providing equity-based incentives without incentivizing the executives to take inappropriate risks in order to enhance their individual compensation;
- compensation programs should be flexible, giving the compensation committee and our board of directors discretion to make adjustments on an as-needed basis;
- similarly situated executives should be compensated similarly; and
- compensation should be transparent and easily understandable to both our executives and our shareholders.

***Significant Management Changes in 2010***

In 2010, we underwent several senior management changes, including the resignation of Dr. Hudson as our President and Chief Executive Officer and the appointment of our Senior Vice President and Chief Financial Officer David Boyle as Interim President and Chief Executive Officer. In addition, in December 2010 we hired Chris Garabedian, a member of our board, as President and Chief Executive Officer, effective January 1, 2011.

***The Compensation Committee***

Our executive compensation program is administered by our compensation committee. As of December 31, 2010, the compensation committee was composed of three directors: M. Kathleen Behrens, Ph.D., John Hodgman and William Goolsbee (Chairman). Also, K. Michael Forrest, Michael Casey and Christopher Garabedian were members of the compensation committee during a portion of 2010.

The compensation committee is responsible for reviewing, assessing, and approving all elements of compensation for our named executive officers. More specifically, the compensation committee is directly responsible for establishing annual Company-wide performance goals and objectives for our named executive officers and for working with our Chief Executive Officer to establish individual performance goals for each of the other named executive officers. This responsibility includes, among other things: (i) evaluating the performance of our Chief Executive Officer and other executives as determined by the compensation committee in light of the approved performance goals and objectives; (ii) setting the compensation of the Chief Executive Officer and other executives based upon the evaluation of the performance of the Chief Executive Officer and the other executives; (iii) making recommendations to the board of directors with respect to new cash-based incentive compensation plans and equity-based compensation plans; and (iv) preparing an annual self-evaluation report of the compensation committee.

The compensation committee has independent authority to make compensation decisions for our named executive officers. Certain duties related to the grant of options to non-executive employees that are otherwise within the scope of the compensation committee's authority have been delegated by the board of directors to the new employee option committee as set forth in the "— Equity Incentive Plan Compensation" section later in this report.

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***Role of Executive Officers in Compensation Decisions***

Our Chief Executive Officer plays a pivotal role in determining executive compensation. No less than annually, our Chief Executive Officer assesses the performance of the named executive officers. He then recommends to the compensation committee a base salary, performance-based cash bonus, and a grant of stock options for each named executive officer based on that assessment. The compensation committee considers the information provided by the Chief Executive Officer, together with other information available to the compensation committee and determines the compensation for each named executive officer other than the Chief Executive Officer. With respect to determining the compensation of our Chief Executive Officer, the compensation committee meets without the Chief Executive Officer.

***Use of Compensation Consultants and Reports***

In establishing compensation for 2010, the compensation committee retained the compensation consultant Frederic W. Cook & Co, Inc. (“FW Cook”) to review our executive and director compensation programs. In November 2009 FW Cook presented its assessment and recommendations to the compensation committee. The FW Cook report considered information including, but not limited to, public filings and the Radford Global Life Sciences Survey. Based in part on such assessment and recommendations, the compensation committee approved increases in the base salaries of our named executive officers in 2010 and recommended changes to the compensation of our non-employee directors, which changes were implemented in September 2010.

In connection with the search for a new permanent Chief Executive Officer, a special committee of the compensation committee retained the compensation consultant Compensia, Inc. to provide assistance in determining the terms and conditions of Mr. Garabedian’s offer of employment as President and Chief Executive Officer. For 2011, the compensation committee engaged Compensia to conduct a thorough review of our executive compensation practices.

***Peer Group Companies for 2010***

In analyzing our executive compensation program for 2010, the compensation committee compared certain aspects of compensation, including base salary, target bonus and long-term equity incentives, to those provided by our peer group. This peer group included biotechnology companies with which we compete for executive talent. For 2010 our peer group consisted of:

- Acadia Pharmaceuticals;
- Angenus (formerly Antigenics);
- ARIAD Pharmaceuticals;
- Array BioPharma;
- Chelsea Therapeutics;
- Idenix Pharmaceuticals;
- Idera Pharmaceuticals;
- Inovio Pharmaceuticals;
- Metabolix;
- NeurogesX;
- Oncogenex Pharmaceuticals;
- Oncothyreon;
- Peregrine Pharmaceuticals;

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- Poniard Pharmaceuticals;
- Sangamo Biosciences;
- Spectrum Pharmaceuticals;
- Stemcells;
- Transcept Pharmaceuticals;
- Vical; and
- Zymogenetics.

Because a majority of our named executive officers have been hired from outside our company in the last three years, total cash compensation generally reflects current market values. In order to attract and retain our executive officers, we position our target cash composition between the competitive median and the 75<sup>th</sup> percentile among the peer group. Base salary is competitively positioned between the median and the 75<sup>th</sup> percentile, while target bonuses are at the competitive median when expressed as a percentage of base salary and between the median and 75<sup>th</sup> percentile when expressed in dollars.

Based on findings from the FW Cook report, the compensation committee determined that its historical annual long-term incentive grants (excluding new-hire awards) were significantly below the median of the peer group. As a result, the annual long-term incentive grants for 2010 were designed to bring total ownership levels for our named executive officers closer to market median levels.

### ***Setting Executive Compensation***

As a general proposition, in setting compensation for the named executive officers, other than the Chief Executive Officer, and in developing its recommendations to the board of directors regarding compensation for the Chief Executive Officer, the compensation committee considers a number of factors, including analyses of compensation in similarly-sized companies in the biopharmaceutical industry, analyses of compensation levels in similar companies in our local geographic area, analyses of reports from compensation consultants, the satisfaction of (or failure to satisfy) previously-developed performance measurements for the named executive officer and our company, and the total vested and unvested equity grants owned by the executive. We compete for executive talent across a broad range of business sectors.

The compensation committee believes it is important when making its compensation-related decisions to be informed as to current practices of similarly situated companies in the biotechnology industry. In addition to the report of its compensation consultant, the compensation committee has historically taken into account input from other sources, including input from members of the compensation committee based on their roles as executive officers and directors of other public companies, as well as other members of the board of directors.

The compensation committee believes that the total compensation package provided to our named executive officers, combining both short-term and long-term incentives, some of which are at risk based on individual and our performance, is competitive without being excessive and is at an appropriate level to assure the retention and motivation of this highly skilled and experienced segment of our workforce, and at the same time would be attractive to any additional talent that might be needed in the changing workplace without creating incentives for inappropriate risk-taking by the named executive officers that might be in their own self-interests, but might not necessarily be in the best long and short term interests of our shareholders.

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***Performance Factors in 2010***

The compensation committee, together with the Chief Executive Officer and full board of directors, establishes performance criteria for the named executive officers, both in terms of individual performance and the performance of our company as a whole, and generally assigns a weight to the performance goals.

The following corporate goals, along with the weighting assigned to each of the goals, including the weight achieved, drove the compensation committee's executive compensation decisions for 2010:

<u>Goal</u>	<u>Assigned Weight</u>	<u>Achieved Weight</u>
Develop Duchenne Muscular Dystrophy ("DMD") program	45%	51%
Advance anti-infective programs	20%	76%
Advance core discovery research projects	15%	59%
Complete a 3-year business plan and strategy	5%	48%
Develop the Company externally and internally	15%	69%
Total	100%	60%

Our Chief Executive Officer's performance bonus is generally based entirely on our achievement of the corporate goals outlined above. This compensation approach applied to Mr. Boyle for 2010 due to his service as our Interim President and Chief Executive Officer. Dr. Hudson was ineligible for a 2010 performance bonus as a result of his resignation in April 2010. The performance bonus of each other named executive officer was based on our achievement of the corporate goals (70%), with the remainder of the performance bonus (30%) for such named executive officers based on the achievement of individual goals.

The goals for each individual officer, along with the weighting assigned to each of the goals, were as follows:

*Stephen Shrewsbury, M.D., Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer*

Dr. Shrewsbury's individual goals for 2010 revolved around the development and government approvals of several of our drugs under development. They consisted of: achievement of certain goals with respect to DMD (35%); achievement of certain goals with respect to preclinical development (10%); securing removal of an administrative hold on a certain drug by the end of the second quarter and holding certain meetings related thereto (15%); supporting submissions of RFPs for Ebola and Marburg viruses and initiating additional toxicology studies on awards with advanced funding (10%); preparing and initiating certain toxicology programs and overseeing the preparation of certain studies in support of RFP (14%); and supporting submission of RFPs for antiviral programs, submitting orphan drug applications for antiviral programs and holding certain meetings (16%). Based on the compensation committee's assessment of his performance during 2010, the compensation committee determined that he had achieved an overall 86% of his individual goals.

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*Paul Medeiros, Senior Vice President of Business Development and Chief Business Officer*

Mr. Medeiros's individual goals for 2010 revolved around securing licensing arrangements and research funding and development with respect to certain drugs and working to achieve approval of our 3-year strategic plan. They consisted of: executing a certain license agreement under terms favorable to us as evidenced by a successful negotiation within ranges agreed to by our board of directors (40%); securing advancement of our anti-infective program by securing new external research funding within a certain range (20%); co-leading development of new discovery research investment and prioritization plan (15%); leading development of and gaining approval of our 3-year strategic business plan (10%); and executing an out-license or research collaboration agreement with a commercial or scientific partner supporting forward development of one or more of our discovery or pre-clinical research programs (15%). Mr. Medeiros will cease to be an employee and officer of our company effective June 1, 2011, but based on the compensation committee's assessment of his performance during 2010, the compensation committee determined that he had achieved an overall 84% of his individual goals.

*Graham Johnson, Ph.D., Senior Vice President of Preclinical Development and Research*

Dr. Johnson's individual goals for 2010 focused on certain strategic goals related to research and development for certain programs and recruiting personnel and resources necessary for certain of our strategic research and discovery goals. They consisted of: locating or retaining the necessary resources, initiating research and making meaningful first-pass experimental progress in at least two internal drug discovery programs (40%); identifying appropriate vendors, seeking competing quotes for each work package and developing a first draft of an integrated development plan for a certain program (20%); identifying and recruiting an experienced drug hunter biologist (20%); improving the facilities and environment of the chemistry and biology group by catalyzing the upgrading of fume hoods and functional improvement in certain systems (15%); working with the business group to put in place a web-based document retrieval process adequate to the needs of a publicly-traded biotechnology company (5%). Dr. Johnson will cease to be an employee and officer of our company effective May 13, 2011, but based on the compensation committee's assessment of his performance during 2010, the compensation committee determined that he had achieved an overall 95% of his individual goals.

***Determining the Total Mix of Compensation***

Our compensation-setting process consists of establishing a targeted overall compensation for each executive and then allocating that compensation between base salary and incentive compensation (annual performance-based cash bonuses and equity incentive awards), based appropriately on publicly available industry and salary survey data. The compensation committee does not have a pre-established policy for allocating total compensation between cash and non-cash compensation, between long-term and currently paid-out compensation, or between fixed and variable compensation. Rather, based on the competitive market assessments and benchmarks, the reports of our compensation consultants, as well as the compensation committee's review of existing outstanding equity incentives on an individual named executive officer basis, the compensation committee determines the appropriate level and mix of total compensation, keeping in mind our compensation philosophy.

The total amount and mix of compensation payable to our named executive officers is premised upon, among other items, the degree to which the executive has a role in determining our strategic direction, the mix of compensation payable to executives in similar roles by companies of a similar size and in our business sector, geographic location, and industry, as well as the quantity and value of unvested equity awards held by each named executive officer and the vesting date of such awards. As one of our primary priorities is to retain our executives, we seek to ensure our named executive officers receive a base salary reflective of our size and the marketplace in which we compete.

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During its evaluation of the appropriate mix of compensation, the compensation committee typically determines what portion of each executive's compensation will be "at risk," with the at risk portion increasing as we give executives greater levels of responsibility. As we believe that many of our named executive officers could command higher salaries in similar roles with larger companies, including with our competitors, our combined cash-based and equity-based bonuses have historically been large relative to base salaries, with the goal of ensuring compensation serves the dual purpose of retention and rewarding exceptional performance.

***Analysis of Executive Compensation Components***

For 2010, the principal components of compensation for named executive officers were identical to the components in 2009, and included:

- base salary;
- performance-based cash bonuses;
- long-term incentives in the form of stock options under the 2002 Equity Incentive Plan;
- 401(k) Plan; and
- other benefits.

***Base Salaries***

As a general proposition, the base salaries of our executive officers are established as part of an annual compensation adjustment cycle, and we also assess salaries at the time of hire, promotion or other change in responsibilities. In establishing those salaries, the compensation committee considers information about base salaries paid by companies of comparable size in the biopharmaceutical industry (including data from the committee's compensation consultant), individual performance, position and tenure of the executive officer, how the salary compares to the salaries of our other executives, and internal comparability considerations. For 2010, in the aggregate, base salaries to our named executive officers are positioned between the competitive median and the 75<sup>th</sup> percentile relative to our peer group. We thought this was appropriate in light of our compensation philosophy and the competitive pressures for attracting and retaining talent.

As noted previously, the Chief Executive Officer and each of the named executive officer received a 3% (annualized) increase in base compensation for 2010. In connection with the added responsibilities of serving as interim President and Chief Executive Officer, Mr. Boyle received a monthly base salary increase of \$3,000 for each month he served in such role. In 2010, we hired Dr. Johnson as our Senior Vice President, Preclinical Development and Research and his 2010 base salary was determined as a result of individual negotiations consistent with our competitive base salary positioning.

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Consistent with the philosophy and events discussed above, the annual base salary levels for 2009 and 2010 for our named executive officers were as follows:

Name	Title	Salary 2010	Salary 2009	\$ Change	% Change 2009 to 2010 Base Salary
Leslie Hudson, Ph.D.(1)	Former President and Chief Executive Officer	\$ 494,400	\$ 480,000	\$ 14,400	3.0%
J. David Boyle II(2)	Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer	333,720	324,000	9,720	3.0%
Stephen B. Shrewsbury, M.D.	Chief Medical Officer and Senior Vice President, Preclinical, Clinical and Regulatory Affairs	319,300	310,000	9,300	3.0%
Paul Medeiros	Senior Vice President of Business Development and Chief Business Officer	321,300	315,000	6,300	2.0%
Graham Johnson, Ph.D.	Senior Vice President of Preclinical Development and Research	300,000	—	N/A	N/A

- (1) Dr. Hudson tendered his resignation at the request of the board of directors on April 20, 2010.
- (2) In connection with his appointment as Interim President and Chief Executive Officer, Mr. Boyle's salary was increased by \$3,000 per month for each month he served in such role. The 2010 salary figure for Mr. Boyle set forth above does not include this temporary increase.

*Performance-Based Cash Bonuses/Equity Awards*

We typically grant cash bonuses to executive officers as part of their annual overall compensation. In 2010, the bonuses for executive officers other than the Chief Executive Officer were targeted to be between 0% and 30% of the executive's base compensation; provided, however, that in connection with his promotion to Interim President and Chief Executive Officer, Mr. Boyle's target bonus was increased from 30% to 40% of his base salary. The target had been 60% of base compensation for the former Chief Executive Officer, Dr. Hudson. Such cash bonuses are in recognition of achievement of performance milestones for the individual named executive officers and of milestones achieved by our company as a whole. The compensation committee takes into account our cash resources and our need to deploy those resources to advance our business plan, and assesses this objective against the need to maintain compensation levels that are competitive within the biotechnology industry. For 2010, performance-based bonuses to named executive officers was positioned at the competitive median within our peer group when expressed a percentage of base salary and between the competitive median and 75<sup>th</sup> percentile when expressed in aggregate dollars. We thought this was appropriate in light of our compensation philosophy and the competitive pressures for attracting and retaining talent.

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As noted above, the compensation committee and the board, in consultation with Dr. Hudson, established corporate performance and individual performance goals for the named executive officers in early 2010. In early 2011, the compensation committee and the board determined that 60% of the corporate goals had been achieved and Mr. Boyle and, with respect to Mr. Boyle, Mr. Garabedian, determined that the other named executive officers had achieved the percentage of individual goals identified above. The following table shows for each of our named executive officers the aggregate dollar value of the cash bonuses awarded for 2009 and 2010:

Name	Title	2010 Bonus	2009 Bonus	% Change (2009 to 2010)	2010 Bonus as a % of 2010 Base Salary
Leslie Hudson, Ph.D. (1)	Former President and Chief Executive Officer	\$ —	\$ 181,440	N/A	N/A
J. David Boyle II	Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer	\$ 88,733	\$ 62,111	43%	27%
Paul Medeiros (2)	Senior Vice President of Business Development and Chief Business Officer	\$ 53,978	\$ 50,000	8%	17%
Stephen Shrewsbury, M.D.	Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer	\$ 64,946	\$ 59,288	10%	20%
Graham Johnson, Ph.D. (3)	Senior Vice President, Preclinical Development and Research	\$ 22,031	\$ —	N/A	18%

- (1) Dr. Hudson tendered his resignation at the request of the board of directors on April 20, 2010 and was ineligible to receive a performance-based cash bonus for 2010.
- (2) Pursuant to the terms of his employment agreement, Mr. Medeiros received a \$50,000 cash bonus in 2009. This figure excludes the \$100,000 signing bonus he received in connection with commencement of his employment in May 2009.
- (3) The 2010 cash bonus figure for Dr. Johnson was pro-rated for his length of service during 2010 and excludes the \$75,000 signing bonus he received in connection with commencement of his employment in August 2010. The 2010 cash bonus as a percentage of Dr. Johnson's 2010 base salary is calculated using pro-rated amounts for his length of service during 2010.

### *Equity Incentive Plan Compensation*

For 2010, the long-term compensation of named executive officers takes the form of stock option awards under our 2002 Equity Incentive Plan ("2002 Plan"). The 2002 Plan is designed to align a significant portion of the executive compensation program with long-term shareholder interests. The 2002 Plan permits the granting of several different types of stock-based awards. The 2002 Plan is administered by the compensation committee. The compensation committee believes that equity-based compensation helps ensure that our named executive officers have a continuing stake in our long-term success, and preserves our cash resources. The 2002 Plan provides incentives to continue in service to us and to create in such executives a more direct interest in the future success of our operations by relating incentive compensation to the achievement of long-term corporate economic objectives. All options granted by us have been granted with an exercise price equal to the closing market price of our common stock on the date of grant and, accordingly, will only have value if our stock price increases subsequent to the date of grant.

In granting options under the 2002 Plan, the compensation committee generally takes into account each named executive officer's responsibilities, relative position in our company, past grants, the total number of vested and unvested equity incentives held by each named executive officer, and approximate grants to individuals in similar positions for companies of comparable size in the biopharmaceutical industry. Based on findings from the FW Cook report, the compensation committee determined that its historical annual long-term incentive grants (excluding new-hire awards) were significantly below the median of our peer group. As a result, the annual long-term incentive grants for 2010 were designed to bring total ownership levels for our named executive officers closer to market median levels.

In addition, the board of directors has delegated to the new employee option committee the authority to approve grants of stock options to newly hired employees who are not our chief executive officer, president, chief financial officer, vice president or a Section 16 officer (as determined pursuant to the rules promulgated under the Securities Exchange Act of 1934). The new employee option committee is composed of our chief executive officer, our chief financial officer and our head of human resources. The new employee

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option committee meets during the last full week of each month and may only grant stock option awards. The stock options granted by the new employee option committee must have an exercise price equal to the closing sales price of our common stock as reported by The NASDAQ Global Market on the last trading day of the month in which such grants were approved. These grants must fall within a predetermined range approved by the compensation committee and may not deviate from the standard vesting terms. In 2010, the standard vesting terms for awards granted by the new employee option committee were as follows: one-third of the shares subject to the option vest at each anniversary of the employee's start date, such that the shares underlying the option are fully vested on the third anniversary of the employee's start date. Beginning in 2011, the standard vesting terms for awards granted by the new employee option committee were as follows: one-fourth of the shares subject to the option vest at the first anniversary of the employee's start date and the balance of the shares vest in equal monthly increments for 36 months following the first anniversary of the start date, such that the shares underlying the option are fully vested on the fourth anniversary of the employee's start date.

The following table shows the stock options granted to named executive officers in 2009 and 2010:

<u>Name</u>	<u>Title</u>	<u>FY 2010 Shares Subject to Option Grant</u>	<u>FY 2009 Shares Subject to Option Grant</u>	<u>% Increase /(Decrease) 2009 to 2010</u>
Leslie Hudson, Ph.D.	Former President and Chief Executive Officer	600,000	350,000	71%
J. David Boyle II	Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer	330,000	150,000	120%
Paul Medeiros	Senior Vice President of Business Development and Chief Business Officer	205,000	400,000	(49%)
Stephen Shrewsbury, M.D.	Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer	205,000	450,000	(54%)
Graham Johnson, Ph.D.	Senior Vice President of Preclinical Development and Research	400,000	N/A	N/A

#### *401(k) Plan*

Our 401(k) Plan is a defined contribution profit sharing plan with a 401(k) option. The plan year is January 1 to December 31, and the 401(k) Plan was adopted on November 1, 1992. Employees who are at least twenty-one years of age and who have provided at least thirty days of service are eligible to participate in the 401(k) Plan. Employees who are union employees, non-resident alien employees with no U.S.-source income and non-common law employees are not eligible to participate. Participants may defer up to the maximum allowed by law. At our discretion, participants may receive a match on the first 4% of compensation that the participant contributes to the 401(k) Plan. As of 2010, the named executive officers received a 401(k) contribution match of up to 4% of their 401(k) Plan contribution subject to the maximum amount permitted by law.

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*Tax and Accounting Implications of the Executive Compensation Program*

We generally will be entitled to a tax deduction in connection with compensation paid to our named executive officers at the time the named executive officer recognizes such compensation. Special rules limit the deductibility of compensation paid to our Chief Executive Officer and other “covered employees” as determined under Section 162(m) and applicable guidance. In addition, the long-term incentive compensation awarded to the named executive officers is based on a fixed value at grant and therefore is not subject to variable accounting treatment under Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718. We view preserving tax deductibility as an important objective, but not the sole objective, in establishing executive compensation. In specific instances we have and in the future will authorize compensation arrangements that are not fully tax deductible but which promote other important objectives.

*Repricing of Stock Options*

We did not reprice any stock options in 2010.

***Employment Agreements with Named Executive Officers***

*Leslie Hudson, Ph.D. — Former President and Chief Executive Officer*

On February 8, 2008, the board of directors appointed Leslie Hudson, Ph.D. as our President and Chief Executive Officer. In connection with his appointment, we and Dr. Hudson entered into an employment agreement providing for Dr. Hudson’s at-will employment. Dr. Hudson resigned from his positions with us on April 20, 2010.

Under the terms of his employment agreement, Dr. Hudson was entitled to an initial annual salary of \$480,000, which amount was subject to review for potential increase, but not decrease, on an annual basis. In addition to his base salary, Dr. Hudson was entitled to an annual bonus based upon our and Dr. Hudson’s achievement of performance objectives established by our board of directors, with the target bonus level being equal to 60% of Dr. Hudson’s base salary. Dr. Hudson’s compensation package was extensively negotiated, and Dr. Hudson’s compensation was high relative to the compensation payable to other executive officers of our company, including our Interim Chief Executive Officer who served between March 2007 and February 2008. In determining Dr. Hudson’s compensation, the board of directors took into account, among other things, the fact that Dr. Hudson was required to relocate from his home in New Jersey, Dr. Hudson’s extensive experience in our industry, and the salaries and potential bonuses commanded by principal executive officers at other companies in our industry.

In connection with his employment, we granted to Dr. Hudson options to purchase 667,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on February 8, 2008, which was \$1.09 per share. Subject to certain exceptions, the options vested in equal annual installments over a period of four years. In addition, on that same date we granted to Dr. Hudson 333,000 restricted shares of our common stock. A portion of the shares of common stock were subject to forfeiture, with 100,000 shares vesting on February 8, 2008 and 233,000 shares vesting in equal annual installments over four years commencing on February 8, 2008. We were also required to reimburse Dr. Hudson for all expenses reasonably incurred by him in discharging his duties for us.

In addition to the compensation described above, Dr. Hudson was entitled under his employment agreement to receive (i) health care benefits for him and his spouse, (ii) reimbursement of up to \$25,000 in legal fees incurred by Dr. Hudson in connection with the negotiation of his employment agreement, (iii) a monthly living allowance of up to \$4,500, (iv) a car allowance of \$1,000 per month and airfare for one round

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trip per week between his home and our headquarters, (v) reimbursement of actual travel and other business expenses, (v) reimbursement of moving expenses and reasonable and customary costs of selling a residence in Princeton, New Jersey, as well as two round-trip economy fare airplane tickets for relocation purposes for each of Dr. Hudson and his spouse, (vi) during the first year of employment, reimbursement for up to four round trip economy airplane tickets per month for travel actually incurred between Portland, Oregon and his home in Bend, Oregon, (vii) four weeks of paid vacation per year, as well as paid holidays generally available to senior executives, (viii) \$9,500 per year for reasonable expenses incurred in connection with Dr. Hudson's federal and state income tax returns and investment advice, and (ix) subject to eligibility requirements, participation in benefits and programs generally available to all employees or executives. In addition, we were required to provide Dr. Hudson with our standard directors and officers insurance policy, and indemnify and hold Dr. Hudson harmless from liability arising out of his services to the fullest extent permitted by Oregon law. Dr. Hudson's employment agreement further provided that Dr. Hudson was entitled to receive certain tax gross-up payments related to certain of the taxable fringe benefits and any golden parachute or deferred compensation excise or penalty taxes.

Dr. Hudson's employment agreement provided that, for a period of two years following Dr. Hudson's termination of employment with us, Dr. Hudson may not engage in certain activities in competition with our business activities, to the extent those competitive activities relate to five competitors specified by us prior to Dr. Hudson's termination. Dr. Hudson is further prohibited, for a period of two years following termination of employment with us, from recruiting, hiring, or assisting a third party in hiring any person then employed by us. The non-competition and the non-solicitation provisions continue in effect following Dr. Hudson's resignation.

Effective April 20, 2010, Dr. Hudson resigned at the request of our board of directors, which resignation was treated as a termination without Cause (as defined in Dr. Hudson's employment agreement). In connection with his resignation, Dr. Hudson entered into a separation and release agreement with us dated April 22, 2010, the benefits of which are described below in the section "Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers."

*J. David Boyle II — Senior Vice President and Chief Financial Officer*

On August 18, 2008, we hired J. David Boyle II as our Senior Vice President and Chief Financial Officer. In connection with his appointment, we and Mr. Boyle entered into an employment agreement dated July 24, 2008 providing for Mr. Boyle's at-will employment. In April 2011, in accordance with the terms of Mr. Boyle's employment agreement, we notified Mr. Boyle that his employment agreement would not be renewed. We will continue to employ Mr. Boyle as our Senior Vice President and Chief Financial Officer on an at-will basis following the expiration of his employment agreement in July 2011. We and Mr. Boyle will determine the terms of his new employment arrangement prior to the expiration of his current employment agreement.

Under the terms of his employment agreement, which will expire pursuant to its terms in July 2011, Mr. Boyle is entitled to an initial annual salary of \$324,000, which amount is subject to review for potential increase, but not decrease, on an annual basis. In addition to his base salary, Mr. Boyle is eligible for an annual bonus of up to 30% of his base salary, based upon Mr. Boyle's achievement of performance objectives established by mutual agreement among Mr. Boyle, our Chief Executive Officer, and the compensation committee. As noted above, Mr. Boyle received a bonus of \$88,733 in connection with his services in 2010.

In connection with his employment, we granted to Mr. Boyle options to purchase 350,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on August 18, 2008, which was \$1.21 per share. Subject to certain exceptions, the options vest in equal annual installments over a period of three years. In addition, on that same date we granted to Mr. Boyle options to purchase an additional 150,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on August 18, 2008, which was \$1.21 per share. The vesting of these 150,000 shares is subject to our achievement of certain milestones, which we have not achieved and will not achieve. We are also required to reimburse Mr. Boyle for all expenses reasonably incurred by him in discharging his duties for us.

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In addition to the compensation described above, under his employment agreement, Mr. Boyle is entitled to receive (i) reimbursement of up to \$100,000 for reasonable expenses incurred in 2008 for reasonable expenses incurred to relocate Mr. Boyle, his spouse and certain members of his family to the city of our headquarters, including the reasonable and customary costs associated with selling his prior residence, moving expenses, and costs associated with purchasing a new residence (ii) reimbursement of up to \$5,000 for reasonable legal fees incurred by Mr. Boyle in connection with the negotiation of his employment agreement, (iii) a monthly living allowance of \$2,000 for a period of up to six months, (iv) four weeks of paid vacation per year, as well as paid holidays generally available to senior executives, and (v) subject to eligibility requirements, participation in benefits and programs generally available to all employees or executives. Mr. Boyle's employment agreement further provides that Mr. Boyle is entitled to receive certain tax gross-up payments related to certain of the taxable fringe benefits.

Mr. Boyle's employment agreement provides that, following Mr. Boyle's termination of employment with us, Mr. Boyle may not engage in certain activities in competition with our business activities for a period between one year and two years, depending on the nature of Mr. Boyle's termination, Mr. Boyle is further prohibited for a period of two years following termination of employment with us from recruiting, hiring, or assisting a third party in hiring any person then employed by us.

Effective April 20, 2010, Mr. Boyle was appointed our Interim President and Chief Executive Officer. As a result of this appointment, Mr. Boyle's salary was increased by \$3,000 per month while serving as the Interim President and Chief Executive Officer, his bonus target percentage for 2010 was increased to 40%, and he was granted a fully vested option on April 20, 2010 to acquire 50,000 shares of our common stock at an exercise price of \$1.24. In connection with Mr. Garabedian's appointment as President and Chief Executive Officer and effective January 1, 2011, Mr. Boyle's salary and bonus target percentage returned to \$333,720 annually and 30%, respectively, which levels were in effect prior to his appointment as Interim President and Chief Executive Officer.

For a description of severance and change in control-related payments to Mr. Boyle under his employment agreement, please see the description in the section below captioned "Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers."

*Stephen B. Shrewsbury — Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer*

On January 26, 2009, we hired Stephen Bevan Shrewsbury, M.D., as our Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer. In connection with his hiring, we and Dr. Shrewsbury entered into an employment agreement dated January 26, 2009 providing for Dr. Shrewsbury's at-will employment. Under the terms of his employment agreement, Dr. Shrewsbury is entitled to an initial annual salary of \$310,000, which amount is subject to review for potential increase, but not decrease, on an annual basis. In addition to his base salary, Dr. Shrewsbury is eligible for an annual bonus of up to 25% of his base salary, based upon Dr. Shrewsbury's achievement of performance objectives established by mutual agreement among Dr. Shrewsbury, our Chief Executive Officer, and the compensation committee. As noted above, Dr. Shrewsbury received a bonus of \$64,946 in connection with his services in 2010.

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In connection with his employment, we granted to Dr. Shrewsbury options to purchase 450,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on January 26, 2009, which was \$1.36 per share. Subject to certain exceptions, the options vest in equal annual installments over a period of three years. In addition, on that same date we granted to Dr. Shrewsbury 60,000 restricted shares of our common stock. The shares became fully vested as of July 27, 2009. We are also required to reimburse Dr. Shrewsbury for all expenses reasonably incurred by him in discharging his duties for us.

In addition to the compensation described above, under his employment agreement, Dr. Shrewsbury is entitled to receive (i) reimbursement of up to \$100,000 for reasonable expenses incurred in 2008 to relocate Dr. Shrewsbury to the city of our headquarters, including the reasonable and customary costs associated with purchasing a new residence and moving expenses, (ii) reimbursement of up to \$3,000 for reasonable legal fees incurred by Dr. Shrewsbury in connection with the negotiation of his employment agreement, (iii) a monthly living allowance of \$2,500 for a period of up to six months, (iv) four weeks of paid vacation per year, as well as paid holidays generally available to senior executives, and (v) subject to eligibility requirements, participation in benefits and programs generally available to all employees or executives. Dr. Shrewsbury's employment agreement further provides that Dr. Shrewsbury is entitled to receive certain tax gross-up payments.

Dr. Shrewsbury's employment agreement provides that, following Dr. Shrewsbury's termination of employment with us, Dr. Shrewsbury may not engage in certain activities in competition with our business activities for a period between one year and two years, depending on the nature of Dr. Shrewsbury's termination. Dr. Shrewsbury is further prohibited for a period of two years following termination of employment with us from recruiting, hiring, or assisting a third party in hiring any person then employed by us.

For a description of severance and change in control-related payments to Dr. Shrewsbury under his employment agreement, please see the description in the section below captioned "Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers."

*Paul Medeiros — Senior Vice President of Business Development and Chief Business Officer*

Effective May 19, 2009, we hired Paul Medeiros as our Senior Vice President of Business Development and Chief Business Officer. In connection with his hiring, we and Mr. Medeiros entered into an employment agreement dated May 19, 2009 providing for Mr. Medeiros' at-will employment. Under the terms of his employment agreement, Mr. Medeiros is entitled to an initial annual salary of \$315,000 per year, which amount is subject to review for potential increase, but not decrease, on an annual basis. In addition to his base compensation, Mr. Medeiros is eligible for an annual bonus up to 25% of his annual basis compensation amount, subject to achievement and satisfaction of goals and objectives established upon mutual agreement of our Chief Executive Officer, our compensation committee and Mr. Medeiros. As noted above, Mr. Medeiros received a bonus of \$53,978 in connection with his services in 2010.

In connection with his employment, we granted to Mr. Medeiros options to purchase 400,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on May 19, 2009, which was \$1.10 per share. Subject to certain exceptions, the options vest in equal annual installments over a period of three years. In addition, on that same date we granted to Mr. Medeiros 100,000 restricted shares of

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our common stock, which will vest on a pro rata basis through the first anniversary of Mr. Medeiros' employment, subject to certain performance-based criteria. As of the date hereof, the performance criterion has not been achieved and we believe the achievement thereof will not occur in light of the termination of Mr. Medeiros' employment with us which will take effect on June 1, 2011.

In addition to his base compensation for 2009, we agreed to pay Mr. Medeiros a \$100,000 sign-on bonus. If Mr. Medeiros had separated from employment with us prior to his one-year anniversary for reasons of (i) termination of Mr. Medeiros by us for "Cause" (as defined in Mr. Medeiros' employment agreement) or (ii) voluntary termination by Mr. Medeiros other than for "Good Reason" (as defined in Mr. Medeiros' employment agreement), the sign-on bonus was completely refundable to us. We are also required to reimburse Mr. Medeiros for all expenses reasonably incurred by him in discharging his duties for us.

In addition to the compensation described above, under his employment agreement, Mr. Medeiros is entitled to receive (i) reimbursement of up to \$120,000 in 2010 for reasonable expenses incurred in 2009 and 2010 to relocate Mr. Medeiros to the location of our headquarters, including the reasonable and customary costs associated with purchasing a new residence and moving expenses, (ii) reimbursement of up to \$5,000 for reasonable legal fees incurred by Mr. Medeiros in connection with the negotiation of the employment agreement, (iii) a monthly living allowance of \$2,500 for a period of up to six months, (iv) four weeks of paid vacation per year, as well as paid holidays generally available to senior executives, and (v) subject to eligibility requirements, participation in benefits and programs generally available to all employees or executives.

Mr. Medeiros' employment agreement provides that, following Mr. Medeiros' termination of employment with us, Mr. Medeiros may not engage in certain activities in competition with our business activities for a period between one year and two years, depending on the nature of Mr. Medeiros' termination. Mr. Medeiros is further prohibited for a period of two years following termination of employment with us from recruiting, hiring, or assisting a third party in hiring any person then employed by us.

For a description of severance and change in control-related payments to Mr. Medeiros under his employment agreement, please see the description in the section below captioned "Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers."

*Graham Johnson — Senior Vice President, Preclinical Development and Research*

On August 15, 2010, we hired Graham Johnson, Ph.D., as our Senior Vice President, Preclinical Development and Research. In connection with his hiring, we and Dr. Johnson entered into an offer letter dated July 9, 2010 providing for Dr. Johnson's at-will employment by us. Under the terms of his offer letter, Dr. Johnson is entitled to an initial annual salary of \$300,000. As an incentive for joining our company, Dr. Johnson received a sign-on bonus of \$75,000, which must generally be returned if Dr. Johnson is terminated for cause or voluntarily terminates his employment prior to the 1-year anniversary of his hiring. In addition, Dr. Johnson is eligible for an annual bonus of up to 25% of his base salary, based upon Dr. Johnson's achievement of performance objectives. Dr. Johnson's bonus for 2010 was prorated for his partial year of service. As noted above, Dr. Johnson received a bonus of \$22,031 in connection with his services in 2010.

In connection with his employment, we granted to Dr. Johnson options to purchase 400,000 shares of our common stock under our 2002 Plan, with an exercise price equal to the fair market value of our common stock on August 23, 2010, which was \$2.03 per share. Subject to certain exceptions, the options vest in equal annual installments over a period of three years.

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In addition to the compensation described above, under his employment agreement, Dr. Johnson is entitled to receive (i) reimbursement of up to \$120,000 for reasonable expenses incurred to relocate Dr. Johnson to the city of our headquarters within one year of the hire date, and (ii) a monthly living allowance of \$4,000 for a period of nine months. Dr. Johnson's employment agreement further provides that Dr. Johnson is entitled to receive certain tax gross-up payments to the extent these fringe benefits are taxable.

For a description of severance and change in control-related payments to Dr. Johnson under his employment agreement, please see the description in the section below captioned "Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers."

***Post-Employment Benefits and Change in Control Arrangements for the Company's Named Executive Officers***

We do not generally provide special post-employment benefits to our named executive officers, other than those available to our employees generally. However, we have entered into agreements with certain named executive officers relating to post-employment benefits and change in control arrangements.

*Leslie Hudson, Ph.D. — Former President and Chief Executive Officer*

Upon termination of Dr. Hudson's employment by us without Cause (as defined in Dr. Hudson's employment agreement) or by Dr. Hudson for Good Reason (as defined in Dr. Hudson's employment agreement) where no Change of Control (as defined in Dr. Hudson's employment agreement) has occurred, we were required to pay to Dr. Hudson (i) all base compensation and earned but unpaid bonuses, and unpaid reimbursements, gross-up payments and other unpaid expenses due at the effective date of termination, (ii) the sum of (x) two years of base compensation, (y) two years of bonus compensation based on the average of the past two years' bonuses actually paid or, if only one year's bonus has been paid, such bonus, or if no bonus has been paid, 50% of the target bonus for the current year, and (z) two times the then current annual cost of health benefits. In addition, all unvested options and all shares of common stock will immediately become fully vested and exercisable. The exercise period of all vested options granted to Dr. Hudson pursuant to our 2002 Equity Incentive Plan will be the earlier of their original expiration date or six months from the effective date of termination.

Effective April 20, 2010, Dr. Hudson resigned at the request of the board of directors, which resignation is being treated as a termination without Cause where no Change of Control has occurred. In connection with his resignation, on April 20, 2010, we entered into a separation agreement with Dr. Hudson (the "Separation Agreement"), the terms of which were previously negotiated pursuant to Dr. Hudson's employment agreement. Pursuant to the terms of the Separation Agreement, Dr. Hudson will receive total cash severance payments of \$1,412,170.00 (the "Cash Severance Payments"), calculated by reference to two (2) times the sum of: (i) his annual base salary in effect as of the Separation Date (\$494,400), (ii) the average of his last two annual bonuses (\$188,669), and (iii) the annual cost of Pfizer retiree healthcare coverage for him and his spouse (\$23,016). The Cash Severance Payments will be made to Dr. Hudson in twenty-four (24) equal monthly installments, less required deductions and withholdings, over the twenty-four (24) month period following the effective date of the Separation Agreement. In addition, as of the effective date of the Separation Agreement, previously granted options to Dr. Hudson for 333,500 shares and 116,500 shares of restricted stock immediately became fully vested and exercisable.

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*J. David Boyle II — Senior Vice President and Chief Financial Officer*

Upon Mr. Boyle's voluntary termination of employment (other than with Good Reason (as defined in Mr. Boyle's employment agreement), we must pay to him all compensation due through the date of termination, but otherwise have no further obligation to him in respect of any period following such termination. Upon Mr. Boyle's death, we must pay to his estate all compensation due at the date of death, plus a continuation of base compensation at the rate set forth in his employment agreement or Mr. Boyle's then-current rate, whichever is greater, from the date of death to the final day of the month following the month in which the death occurs.

Under his employment agreement, Mr. Boyle is entitled to receive severance pay of one year's base salary following termination of his employment by us other than for Cause (as defined in Mr. Boyle's employment agreement) and other than in connection with a Change in Control (as defined in Mr. Boyle's employment agreement). Mr. Boyle is entitled to receive severance pay of two years' base salary if he is terminated by us without Cause in connection with a Change in Control or if he voluntarily terminates his employment for Good Reason. Further, upon any termination other than for Cause or a termination with Good Reason in connection with a Change in Control, Mr. Boyle's employment agreement provides for full vesting of all outstanding stock options, which are exercisable for a period of 180 days following the effective date of termination. Mr. Boyle's employment agreement generally provides for a cut-back to the extent that Mr. Boyle may be subject to an golden parachute excise tax under Code Section 280G. However, due to uncertainties in the application of such provision and in light of Mr. Boyle potentially being provided payments subject to such an excise tax, we will provide Mr. Boyle a tax-neutral gross up if amounts are paid to Mr. Boyle that are subject to the excise tax.

*Stephen B. Shrewsbury, M.D. — Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer*

Upon Dr. Shrewsbury's voluntary termination of employment (other than with Good Reason (as defined in Dr. Shrewsbury's employment agreement), we must pay to him all compensation due through the date of termination, but otherwise have no further obligation to him in respect of any period following such termination. Upon Dr. Shrewsbury's death, we must pay to his estate all compensation due at the date of death, plus a continuation of base compensation at the rate set forth in his employment agreement or Dr. Shrewsbury's then-current rate, whichever is greater, from the date of death to the final day of the month following the month in which the death occurs.

Under the terms of his employment agreement, Dr. Shrewsbury is entitled to receive severance pay of one year's base salary following termination of his employment by us other than for Cause (as defined in Dr. Shrewsbury's employment agreement) and other than in connection with a Change in Control (as defined in Dr. Shrewsbury's employment agreement). Dr. Shrewsbury is entitled to receive severance pay of two year's base salary if he is terminated by us without Cause in connection with a Change in Control or if he voluntarily terminates his employment for Good Reason in connection with a Change in Control. Further, upon any termination other than for Cause or a termination with Good Reason in connection with a Change in Control, Dr. Shrewsbury's employment agreement provides for full vesting of all outstanding stock options, which are exercisable for a period of 180 days following the effective date of termination. Dr. Shrewsbury's employment agreement generally provides for a cut-back to the extent that Dr. Shrewsbury may be subject to

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an golden parachute excise tax under Code Section 280G. However, due to uncertainties in the application of such provision and in light of Dr. Shrewsbury potentially being provided payments subject to such an excise tax, we will provide Dr. Shrewsbury a tax-neutral gross up if amounts are paid to Dr. Shrewsbury that are subject to the excise tax.

*Paul Medeiros — Senior Vice President of Business Development and Chief Business Officer*

Upon Mr. Medeiros' voluntary termination of employment (other than with Good Reason (as defined in Mr. Medeiros' employment agreement), we must pay to him all compensation due through the date of termination, but otherwise has no further obligation to him in respect of any period following such termination. Upon Mr. Medeiros' death, we must pay to his estate all compensation due at the date of death, plus a continuation of base compensation at the rate set forth in his employment agreement or Mr. Medeiros' then-current rate, whichever is greater, from the date of death to the final day of the month following the month in which the death occurs.

Under the terms of his employment agreement, Mr. Medeiros is entitled to receive severance pay of one year's base salary following termination of his employment by us other than for Cause (as defined in Mr. Medeiros' employment agreement) and other than in connection with a Change in Control (as defined in Mr. Medeiros' employment agreement). Mr. Medeiros is entitled to receive severance pay of two year's base salary if he is terminated by us without Cause in connection with or after a Change in Control or if he voluntarily terminates his employment for Good Reason in connection with or within 24 months after a Change in Control. Further, upon termination other than for Cause in connection with or after a Change in Control or a termination with Good Reason in connection with or within 24 months after a Change in Control, Mr. Medeiros' employment agreement provides for full vesting of all outstanding stock options, restricted stock units and other long-term compensation benefits, and stock options will be exercisable for a period of 180 days following the effective date of termination. Mr. Medeiros' employment agreement generally provides for a cut-back to the extent that Mr. Medeiros may be subject to an golden parachute excise tax under Code Section 280G. However, due to uncertainties in the application of such provision and in light of Mr. Medeiros potentially being provided payments subject to such an excise tax, we will provide Mr. Medeiros a tax-neutral gross up if amounts are paid to Mr. Medeiros that are subject to the excise tax.

Mr. Medeiros' employment with us will terminate effective June 1, 2011. Pursuant to the terms of a separation and release agreement that we expect to enter into with Mr. Medeiros in connection with the termination of his employment, Mr. Medeiros will receive a lump sum severance payment of \$321,300 (the equivalent of 12 months of his 2010 base salary) and all of his vested options will immediately vest and be exercisable for a period of 180 days following June 1, 2011.

*Graham Johnson — Senior Vice President, Preclinical Development and Research*

Under the terms of his offer letter, upon Dr. Johnson's termination of employment by us other than for Cause (as defined in Dr. Johnson's employment agreement) in connection with a Change in Control (as defined in Dr. Johnson's employment agreement) or upon Dr. Johnson's voluntary termination of employment in connection with a Change in Control, Dr. Johnson receives full vesting of all outstanding stock options, which will be exercisable for a period of 180 days following the effective date of termination.

Dr. Johnson's employment with us will terminate effective May 13, 2011. Pursuant to the terms of a separation agreement and release that we expect to enter into with Dr. Johnson in connection with the termination of his employment, Dr. Johnson will receive a lump sum severance payment of \$75,000 (the equivalent of three months of his 2010 base salary) and be eligible for reimbursement of up to \$5,000 for relocation expenses.

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**Compensation Committee Report**

The information contained in this report will not be deemed to be “soliciting material” or to be “filed” with the SEC, nor will such information be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate it by reference in such filing.

In reliance on the reviews and discussions referred to above and the review and discussion of the section captioned “Compensation Discussion and Analysis” with our management, the compensation committee has recommended to the board of directors and the board of directors has approved, that the section captioned “Compensation Discussion and Analysis” be included in this Annual Report on Form 10-K and the proxy statement for our annual meeting of shareholders.

COMPENSATION COMMITTEE

William A. Goolsbee (Chairman)  
M. Kathleen Behrens  
John Hodgman

**Summary Compensation Table**

The table below summarizes the total compensation paid or earned by each of the named executive officers for 2010. Based on the fair value of equity awards granted to named executive officers in 2010 and the base salary of the named executive officers, “Salary” accounted for, on average, approximately 32% of the total compensation of the named executive officers, incentive compensation including cash bonus and stock option grants, accounted for approximately 55% of the total compensation of the named executive officers and benefits accounted for approximately 13% of the total compensation of named executive officers:

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary</u> <u>(\$)</u>	<u>Bonus</u> <u>(\$)(1)</u>	<u>Stock</u> <u>Awards</u> <u>(\$)(2)</u>	<u>Option</u> <u>Awards</u> <u>(\$)(2)</u>	<u>Non-Equity</u> <u>Incentive Plan</u> <u>Compensation</u> <u>(\$)</u>	<u>All Other</u> <u>Compensation</u> <u>(\$)</u>	<u>Total</u> <u>(\$)</u>
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(i)	(j)
J. David Boyle II	2010	\$ 358,396	—	—	\$ 328,099	\$ 88,733	\$ 9,800	\$ 785,028
Former Interim President and Chief	2009	324,000	—	\$ 42,579	117,000	62,111	19,437	565,127
Executive Officer and Current Senior Vice President and Chief Financial Officer(4)	2008	93,462	—	—	510,000	72,973	158,367	834,802
Paul Medeiros	2010	\$ 320,775	—	—	\$225,197	\$ 53,978	\$ 59,800	\$ 659,750
Senior Vice President of Business Development, Chief Business Officer and Secretary(5)	2009	167,192	\$ 100,000	\$ 110,000	372,000	50,000	11,628	810,820
Stephen Shrewsbury, M.D.	2010	\$ 324,049	—	—	\$225,197	\$ 64,946	\$ 29,612	\$ 643,803
Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer(6)	2009	264,295	—	\$ 81,600	513,000	59,288	55,558	973,741
Graham Johnson, Ph.D.	2010	\$ 88,846	\$ 75,000	—	\$ 549,480	\$ 22,031	\$ 11,691	\$ 747,048
Senior Vice President of Preclinical Development and Research(7)								
Leslie Hudson, Ph.D.	2010	\$ 217,489	—	—	\$ 636,180	—	\$ 438,471	\$ 1,292,140
Former President and Chief Executive Officer(8)	2009	480,000	—	\$ 114,378	273,000	\$ 181,440	94,101	1,142,919
	2008	411,551	—	362,970	613,640	196,020	195,481	1,779,651

(1) Bonus awards paid under our annual cash incentive bonus plan are included in the “Non-Equity Incentive Plan Compensation” column. These payments were made based on predetermined performance metrics. See footnote 3 below.

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- (2) The amounts included in the “Stock Awards” and “Option Awards” columns reflect the aggregate grant date fair value of awards during each year calculated in accordance with FASB ASC Topic 718. Assumptions used in the calculation of this amount are included in Note 3 to the financial statements set forth in our Annual Report on Form 10-K for 2010, filed with the SEC on March 15, 2011. See the table below captioned “Grants of Plan Based Awards for 2010” for additional information on equity awards granted in 2010.
- (3) Non-Equity Incentive Plan Compensation includes awards earned under our annual cash incentive bonus plan. See the table below captioned “Grants of Plan Based Awards for 2010” and the “Compensation Discussion and Analysis” above for additional information.
- (4) Mr. Boyle served as our Interim President and Chief Executive Officer from April 20, 2010 to December 31, 2010 during which period he received a monthly base salary increase of \$3,000. Mr. Boyle continues to serve as Senior Vice President and Chief Financial Officer. The amounts disclosed under the column entitled “All Other Compensation” include the following: for 2010, \$9,800 represents matching funds contributed to Mr. Boyle’s 401(k) account by us; for 2009, \$9,637 is related to temporary living and travel expenses and \$9,800 represents matching funds contributed to Mr. Boyle’s 401(k) account by us; and for 2008, \$156,207 is related to relocation and temporary living expenses and \$2,160 represents matching funds contributed to Mr. Boyle’s 401(k) account by us.
- (5) Mr. Medeiros was appointed as our Senior Vice President of Business Development and Chief Business Officer in 2009. Pursuant to the terms of his May 2009 employment agreement with us, Mr. Medeiros received a signing bonus of \$100,000, which amount is set forth under the column entitled “Bonus,” and also received a contractually guaranteed bonus of \$50,000 for 2009 under our annual cash incentive bonus plan, which amount is set forth under the column entitled “Non-Equity Incentive Plan Compensation.” The amounts disclosed under the column entitled “All Other Compensation” include the following: for 2010, \$50,000 is related to relocation and temporary living expenses and \$9,800 represents matching funds contributed to Mr. Medeiros’s 401(k) account by us; and for 2009, \$6,378 is related to legal expenses reimbursed to Mr. Medeiros pursuant to the terms of his employment agreement and \$5,250 represents matching funds contributed to Mr. Medeiros’s 401(k) account by us.
- (6) Dr. Shrewsbury was appointed as Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer in 2009. The amounts disclosed under the column entitled “All Other Compensation” include the following: for 2010, \$9,800 represents matching funds contributed to Dr. Shrewsbury’s 401(k) account by us, \$4,812 is related to relocation expenses and \$15,000 is related to financial advisory services; and for 2009, \$45,758 is related to relocation expenses and \$9,800 represents matching funds contributed to Dr. Shrewsbury’s 401(k) account by us.
- (7) Dr. Johnson was appointed as our Senior Vice President of Preclinical Development and Research in 2010. Pursuant to the terms of his July 2010 offer letter, Dr. Johnson received a signing bonus of \$75,000, which amount is set forth under the column entitled “Bonus.” The amounts disclosed under the column entitled “All Other Compensation” include the following: for 2010, \$6,555 represents matching funds contributed to Dr. Johnson’s 401(k) account by us and \$5,136 is related to relocation expenses.
- (8) Dr. Hudson tendered his resignation at the request of the board on April 20, 2010. Dr. Hudson elected to receive his cash incentive bonus earned in 2008 of \$196,020 in shares, which amount is set forth under the column entitled “Non-Equity Incentive Plan Compensation.” In lieu of cash, 213,065 shares of our common stock were issued on February 10, 2009 at \$0.92 per share. The amounts disclosed under the column entitled “All Other Compensation” include the following: for 2010, \$26,144 is related to temporary living expenses, \$13,870 is related to financial services and \$398,457 is related to cash severance costs; for 2009, \$84,301 is related to temporary living and travel expenses and \$9,800 represents matching funds contributed to Dr. Hudson’s 401(k) account by us; and for 2008, \$186,281 is related to relocation and temporary living expenses and \$9,200 represents matching funds contributed to Dr. Hudson’s 401(k) account by us.

See the discussion above under the section captioned “Employment Agreements with Named Executive Officers” for a discussion of our employment arrangements with our named executive officers.

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**Grants of Plan Based Awards in 2010**

Name (a)	Award	Grant Date (1) (b)	Estimated Future Payouts Under Non-Equity Incentive Plan Awards (2)			All Other Option Awards: Number of Securities Underlying Options (#) (j)	Exercise or Base Price of Option Awards (\$) (k)	Grant Date Fair Value of Stock and Option Awards \$(3) (l)
			Threshold (\$) (c)	Target (\$) (d)	Maximum (\$) (e)			
J. David Boyle II(4)	Stock Options	2/9/2010				180,000	1.45	190,854
Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer	Stock Options	3/9/2010				100,000	1.30	95,070
	Stock Options	4/20/2010	—	100,116	—	50,000	1.24	42,175
	Annual Incentive							
Paul Medeiros(5)	Stock Options	2/9/2010				180,000	1.45	190,854
Senior Vice President of Business Development, Chief Business Officer and Secretary	Stock Options	8/23/2010	—	80,325	—	25,000	2.03	34,343
	Annual Incentive							
Stephen Shrewsbury, M.D.(6)	Stock Options	2/9/2010				180,000	1.45	190,854
Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer	Stock Options	8/23/2010				25,000	2.03	34,343
	Annual Incentive		—	95,790	—			
Graham Johnson, Ph.D.(7)	Stock Options	8/23/2010				400,000	2.03	549,480
Senior Vice President of Preclinical Development and Research	Annual Incentive		—	75,000	—			
Leslie Hudson, Ph.D.(8)	Stock Options	2/9/2010	—	N/A	—	600,000	1.45	636,180
Former President and Chief Executive Officer	Annual Incentive							

- (1) Consistent with the provisions of our 2002 Equity Incentive Plan in effect at the date of grant, options were priced at the last reported sale price of our common stock on The NASDAQ Global Market on the date of grant, or, if The NASDAQ Global Market was closed on such day, the last day prior to the grant date on which such market was open.
- (2) Annual incentive bonuses were earned in 2010. The actual amounts paid to each of the named executive officers for 2010 are set forth in the individual footnotes below.
- (3) These amounts represent the grant date fair value of option awards granted in 2010. These amounts do not represent the actual amounts paid to or realized by the named executive officer for these awards during 2010. For a more detailed description of the assumptions used for purposes of determining grant date fair value see Note 2 to the financial statements set forth in our Annual Report on Form 10-K for 2010, filed with the SEC on March 15, 2011.
- (4) On February 14, 2011, the compensation committee approved an annual incentive bonus of \$88,733.
- (5) On February 14, 2011, the compensation committee approved an annual incentive bonus of \$53,978.
- (6) On February 14, 2011, the compensation committee approved an annual incentive bonus of \$64,946.
- (7) On February 14, 2011, the compensation committee approved an annual incentive bonus of \$22,031.
- (8) Dr. Hudson resigned as our President and Chief Executive Officer in April 2010 at the request of the board of directors and was ineligible to receive an annual incentive bonus for 2010.

## Outstanding Equity Awards at 2010 Year End

Name	Option Awards			
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Options Exercise Price (\$)	Option Expiration Date
(a)	(b)	(c)	(e)	(f)
J. David Boyle II, Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer	233,334 50,000 — — 50,000	116,666(1) 100,000(2) 180,000(3) 100,000(4) — (5)	1.21 0.92 1.45 1.30 1.24	8/18/2018 2/10/2019 2/9/2020 3/9/2020 4/20/2020
Paul Medeiros, Senior Vice President of Business Development, Chief Business Officer and Secretary	133,334 — —	266,666(6) 180,000(3) 25,000(7)	1.10 1.45 2.03	5/19/2019 2/9/2020 8/23/2020
Stephen Shrewsbury, M.D., Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer	150,000 — —	300,000(8) 180,000(3) 25,000(7)	1.36 1.45 2.03	1/26/2019 2/9/2020 8/23/2020
Graham Johnson, Ph.D., Senior Vice President of Preclinical Development and Research	—	400,000(7)	2.03	8/23/2020
Leslie Hudson, Ph.D., Former President and Chief Executive Officer(9)	—	—	—	—

- (1) This stock option fully vests on August 18, 2011, and vests at a rate of 1/3 annually on the anniversary of grant.
- (2) This stock option fully vests on February 10, 2012, and vests at a rate of 1/3 annually on the anniversary of grant.
- (3) This stock option fully vests on February 9, 2013, and vests at a rate of 1/3 annually on the anniversary of grant.
- (4) This stock option fully vests on March 9, 2013, and vests at a rate of 1/3 annually on the anniversary of grant.
- (5) Effective upon his appointment as Interim President and Chief Executive Officer, Mr. Boyle was granted a fully vested option to acquire 50,000 shares of our common stock with an exercise price of \$1.24 per share.
- (6) This stock option fully vests on May 19, 2012, and vests at a rate of 1/3 annually on the anniversary of grant.
- (7) This stock option fully vests on August 23, 2013, and vests at a rate of 1/3 annually on the anniversary of grant.
- (8) This stock option fully vests on January 26, 2012, and vests at a rate of 1/3 annually on the anniversary of grant.
- (9) Dr. Hudson resigned as our President and Chief Executive Officer in April 2010 at the request of the board of directors, which resignation was treated as a termination without cause. Accordingly, effective April 20, 2010, all of Dr. Hudson's unvested options became fully vested and exercisable until October 20, 2010.

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**2010 Option Exercises and Stock Vested**

Name	(a)	Option awards		Stock awards	
		Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
		(b)	(c)	(d)	(e)
Leslie Hudson, Ph.D.(1)					
Former President and Chief Executive Officer		1,617,000	\$911,088	174,750	\$216,690

- (1) Besides Dr. Hudson, our Former President and Chief Executive Officer, none of our named executive officers exercised any stock options during 2010 or vested in any restricted stock.

**2010 Pension Benefits**

None of our named executive officers are entitled to pension benefits or other payments of benefits pursuant to any established plan following retirement.

**2010 Nonqualified Deferred Compensation**

None of our named executive officers are entitled to benefits under any nonqualified defined contribution or nonqualified deferred compensation plans.

**Potential Payments Upon Termination or a Change in Control**

The table below reflects the amount of compensation payable to each of our named executive officers in the event of termination of such executive's employment (either before or in connection with a change in control) or in the event of a change in control without termination of such executive's employment. The amount of compensation payable to each named executive officer upon (i) termination without cause before a change in control, (ii) termination without cause in connection with a change in control or resignation for good reason in connection with a change in control and (iii) in connection with a change of control, is shown below. The amounts shown assume that such termination or change in control, as applicable, was effective as of December 31, 2010, and thus includes amounts earned through such time and are estimates of the amounts which would be paid out to the executives upon the occurrence of the relevant triggering event.

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Name	Benefit (a)	Before Change	After Change	Change in
		in Control, Termination w/o Cause (\$) (b)	in Control, Termination w/o Cause or Resignation for Good Reason (\$) (c)	Control (S)(1) (g)
J. David Boyle II, Former Interim President and Chief Executive Officer and Current Senior Vice President and Chief Financial Officer(2)	Cash Severance Stock Options	\$ 333,720 428,766(3)	\$ 667,440 428,766(3)	— \$ 428,766
Leslie Hudson, Ph.D., Former President and Chief Executive Officer(4)(5)	Cash Severance Stock Options Restricted Stock	\$ 1,412,170 212,050 567,082	— — —	— — —
Graham Johnson, Ph.D., Senior Vice President of Preclinical Development and Research(6)	Cash Severance Stock Options	— \$ 36,000(3)	— \$ 36,000(3)	— \$ 36,000
Paul Medeiros, Senior Vice President of Business Development and Chief Business Officer(7)	Cash Severance Stock Options	\$ 321,300 394,849(3)	\$ 642,600 394,849(3)	— \$ 394,849
Stephen Shrewsbury, M.D., Senior Vice President of Preclinical, Clinical, and Regulatory Affairs and Chief Medical Officer(8)	Cash Severance Stock Options	\$ 319,300 350,850(3)	\$ 638,600 350,850(3)	— \$ 350,850

- (1) Pursuant to the terms of our 2002 Equity Incentive Plan, upon the occurrence of a change in control (as defined in the 2002 Equity Incentive Plan) of our company, all awards granted pursuant to such plan shall immediately become exercisable or shall vest without any further action or passage of time. The stated dollar amounts in this column reflect the spread value of all unvested stock options held by each named executive officer, excluding Dr. Hudson, on December 31, 2010, assuming a stock price of \$2.12 per share, the closing price of our common stock on The NASDAQ Global Market on December 31, 2010.
- (2) Upon termination of Mr. Boyle's employment by us without cause (as defined in Mr. Boyle's employment agreement) and other than in connection with a change in control (as defined in Mr. Boyle's employment agreement) (i) we shall pay to Mr. Boyle 12 months of his then current base compensation and (ii) all unvested options shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. Upon termination of Mr. Boyle's employment by us without cause in connection with a change in control or upon Mr. Boyle's voluntary termination of employment for good reason (as defined in Mr. Boyle's employment agreement) (i) we shall pay to Mr. Boyle 24 months of his then current base compensation (ii) and all unvested options shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. The receipt of the benefits described herein is contingent upon Mr. Boyle signing a form of separation and release agreement attached as an exhibit to his employment agreement.
- (3) The stated dollar amounts reflect the spread value of all unvested stock options held by the applicable named executive officer on December 31, 2010, assuming a stock price of \$2.12 per share, the closing price of our common stock on The NASDAQ Global Market on December 31, 2010.
- (4) Cash severance is payable in equal monthly installments over 24 months for Dr. Hudson. As of January 2011, 16 monthly payments will be made to Dr. Hudson, with the final payment made in April 2012.
- (5) On April 20, 2010, our former president and chief executive officer, Leslie Hudson, Ph.D., tendered his resignation at the request of our board of directors. Pursuant to his separation agreement, Dr. Hudson received total cash severance payments of \$1,412,170 (comprised of two times the sum of (i) his annual base salary in effect as of the separation date (\$494,400), (ii) the average of his last two annual bonuses (\$188,669), and (iii) the annual cost of Pfizer retiree healthcare coverage for him and his spouse (\$23,016)). The cash severance payments are paid to Dr. Hudson in 24 equal monthly installments, less required deductions and withholdings following the effective date of the separation agreement. In addition, as of the effective date of the separation agreement, unvested options to purchase 1,166,833 shares of our common stock and 116,500 shares of restricted stock previously granted to Dr. Hudson became fully vested and exercisable.
- (6) Upon termination of Dr. Johnson's employment by us without cause (as defined in Dr. Johnson's employment agreement) in connection with a change in control (as defined in Dr. Johnson's employment agreement) or upon Dr. Johnson's voluntary termination of employment in connection with a change in control, all unvested options shall immediately vest and be exercisable for a period of 180 days following the effective date of termination.
- (7) Upon termination of Mr. Medeiros's employment by us without cause (as defined in Mr. Medeiros's employment agreement) and other than in connection with or after a change in control (as defined in Mr. Medeiros's employment agreement) (i) we shall pay to Mr. Medeiros 12 months of his then current base compensation, with such payment to be made in a lump sum payment within 60 days of such termination of employment and (ii) all unvested equity awards and other long term compensation benefits then in effect shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. Upon termination of Mr. Medeiros's employment by us without cause in connection with or after a change in control or upon Mr. Medeiros's voluntary termination of employment for good reason (as defined in Mr. Medeiros's employment agreement) in connection with or within 24 months after a change in control (i) we shall pay to Mr. Medeiros 24 months of his then current base compensation, with such payment to be made in a lump sum payment within 60 days of such termination of employment and (ii) all unvested equity awards and other long term compensation benefits then in effect shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. The receipt of the benefits described herein is contingent upon Mr. Medeiros signing a form of separation and release agreement attached as an exhibit to his employment agreement.
- (8) Upon termination of Dr. Shrewsbury's employment by us without cause (as defined in Dr. Shrewsbury's employment agreement) and other than in connection with a change in control (as defined in Dr. Shrewsbury's employment agreement) (i) we shall pay to Dr. Shrewsbury 12 months of his then current base compensation and (ii) all unvested options shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. Upon termination of Dr. Shrewsbury's employment by us without cause in connection with a change in control or upon Dr. Shrewsbury's voluntary termination of employment for good reason (as defined in Dr. Shrewsbury's employment agreement) in connection with a change in control (i) we shall pay to Dr. Shrewsbury 24 months of his then current base compensation and (ii) all unvested options shall immediately vest and be exercisable for a period of 180 days following the effective date of termination. The receipt of the benefits described herein is contingent upon Dr. Shrewsbury

signing a form of separation and release agreement attached as an exhibit to his employment agreement.

For a further discussion of our obligations on a change of control or termination of a named executive officer, see also the discussion above under “Post-Employment Benefits and Change in Control Arrangements.”

### **Compensation of Directors**

We use a combination of cash and stock-based incentive compensation to attract and retain qualified candidates to serve on the board of directors. In setting director compensation, we consider the significant amount of time that directors expend in fulfilling their duties to us as well as the skill-level we require of our directors. Board members receive cash compensation in U.S. dollars. We also reimburse our directors for travel and other necessary business expenses incurred in the performance of their services for us.

### ***Cash Compensation***

On September 27, 2010, our board of directors, upon the recommendation of the compensation committee, approved and adopted a Non-Employee Director Compensation Policy (the "Director Compensation Policy"). Under the Director Compensation Policy, our non-employee directors receive cash compensation of \$35,000 per year for their service on the board of directors. In addition, any non-employee director serving as chairperson of the board receives an additional \$45,000 per year for service as chairperson. The chairpersons of the audit, compensation and nominating and corporate governance committees receive additional fees of \$16,000, \$12,000 and \$5,000 per year, respectively, for such service. Finally, members of the audit, compensation and nominating and corporate governance committees that are not serving as the chairperson of such committees receive additional fees of \$8,000, \$6,000 and \$3,000 per year, respectively, for such service. All cash fees are paid on a quarterly basis at the beginning of the applicable quarter.

In 2010, prior to the adoption of the Director Compensation Policy, our non-employee directors, excluding the chairperson of the board, received cash compensation of \$30,000 per year for their service on the board of directors. The non-employee chairperson of the board received cash compensation of \$75,000 per year for their service as chairperson. The chairpersons of the audit, compensation and nominating and corporate governance committees received additional fees of \$12,000, \$5,000 and \$5,000 per year, respectively, for such service. Finally, members of the audit, compensation and nominating and corporate governance committees that were not serving as the chairperson of such committees received additional fees of \$8,000, \$3,000 and \$3,000 per year, respectively, for such service. All cash fees were paid on a quarterly basis at the beginning of the applicable quarter.

### ***Stock-Based Compensation***

Pursuant to the Director Compensation Policy, each individual who is first elected or appointed as a non-employee member of the board of directors is automatically granted an option to purchase 60,000 shares of our common stock, with 25% of the total amount of shares underlying the option vesting each year on the earlier of (i) the anniversary date of the grant and (ii) the date of the annual meeting of our shareholders in the year following the date of grant. In addition, each non-employee director who has served on the board of directors for at least six months will be automatically granted an option to purchase 30,000 shares of our common stock on the date of the first meeting of the board of directors held after the annual meeting of our shareholders. All of the shares underlying such option will vest on the earlier of (i) the anniversary date of the grant and (ii) the date of the annual meeting of our shareholders in the year following the date of grant, provided that the non-employee director continues to serve as a director through such date. Also, each non-employee director who has served on the board of directors for at least six months prior to the first meeting of the board of directors held after the annual meeting of our shareholders will be automatically granted a restricted stock award for 5,000 shares of our common stock on the date of the first meeting of the board of directors held after the annual meeting of our shareholders. All of the shares underlying the restricted stock award will vest on the earlier of (i) the anniversary date of the grant and (ii) the date of the annual meeting of our shareholders in the year following the date of grant, provided that the non-employee director continues to serve as a director through such date. The stock-based compensation component for non-employee directors prior to the adoption of the Director Compensation Policy was the same as that set forth in the Director Compensation Policy.

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The following table sets forth compensation information for our non-employee directors for 2010. The table excludes Dr. Leslie Hudson who did not receive any compensation from us in his role as director in 2010. All compensation numbers are expressed in U.S. dollars.

**Director Compensation for 2010**

Name (a)	Fees Earned or Paid in Cash (\$) (b)	Stock Awards (\$) (c)	Option Awards \$(1) (d)	All Other Compensation (\$) (g)	Total (\$) (h)
William Goolsbee	\$ 57,750	\$ 6,500	\$ 26,529	—	\$ 90,779
Anthony Chase (2)	30,000	—	50,610	—	80,610
John Hodgman	46,500	6,500	26,529	—	79,529
Christopher Garabedian (3)	24,500	—	53,058	—	77,558
Gil Price, M.D.	41,750	6,500	26,529	—	74,779
M. Kathleen Behrens, Ph.D.	39,000	6,500	26,529	—	72,029
Hans Wigzell, M.D., Ph.D. (3)(4)	16,250	—	53,058	\$ 61,224	130,532
<b>Former Directors</b>					
Michael Casey (5)	41,500	—	—	—	41,500
K. Michael Forrest (6)	16,500	—	—	—	16,500
Christopher Henney, Ph.D., D.Sc. (5)	16,500	—	—	—	16,500

- (1) The amounts in the option awards column reflect the aggregate grant date fair value of option awards granted in 2010 calculated in accordance with FASB ASC Topic 718. Assumptions used in the calculation of this amount are included in Note 3 to the financial statements set forth in our Annual Report on Form 10-K for 2010, filed with the SEC on March 15, 2011. As of December 31, 2010, each director and former director had the following number of options and shares of restricted stock outstanding, respectively: Mr. Goolsbee: 103,000 and 5,000; Mr. Chase: 60,000 and 0; Mr. Hodgman: 133,334 and 5,000; Mr. Garabedian: 60,000 and 0; Dr. Price: 103,000 and 5,000; Dr. Behrens 90,000 and 5,000; Dr. Wigzell: 140,000 and 0; Mr. Casey: 68,000 and 0; Mr. Forrest: 378,000 and 0; and Dr. Henney 15,000 and 0.
- (2) Mr. Chase was appointed to the board of directors in April 2010. For 2010, Mr. Chase did not receive the annual grants for non-employee directors of 5,000 shares of restricted stock and an option to purchase 30,000 shares. In connection with his appointment to the board, Mr. Chase was granted an option to purchase 60,000 shares.
- (3) Mr. Garabedian and Dr. Wigzell were elected to the board of directors in June 2010. For 2010, neither Mr. Garabedian nor Dr. Wigzell received the annual grants for non-employee directors of 5,000 shares of restricted stock and an option to purchase 30,000 shares. In connection with their election, each of Mr. Garabedian and Dr. Wigzell was granted an option to purchase 60,000 shares. In connection with his appointment as our President and Chief Executive Officer, Mr. Garabedian will no longer receive compensation for service on the board of directors.
- (4) The amounts set forth in the column entitled "All Other Compensation" were earned by Dr. Wigzell prior to his election to our board of directors pursuant to the terms of a consulting agreement with us, which has terminated. The aggregate amount includes cash fees of \$25,000 and an option to purchase 40,000 shares of common stock with a grant date fair value of \$36,224 (calculated in accordance with FASB ASC Topic 718).
- (5) Mr. Casey and Dr. Henney did not stand for reelection to the board of directors at our 2010 annual meeting of shareholders.
- (6) Mr. Forrest resigned from the board of directors in April 2010.

**Risk Assessment and Compensation Practices**

We believe that any risks arising from our compensation policies and programs are not reasonably likely to have a material adverse effect on us in the future.

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The compensation committee reviewed our compensation policies and programs and determined the following:

- we structure our total compensation to consist of both fixed (salary and benefits) and variable compensation (cash incentive, equity compensation and merit based annual adjustments). We believe that the variable compensation elements provide an appropriate percentage of overall compensation to motivate executives to focus on our performance, while the fixed element serves to provide an appropriate and fair compensation level that allows us to remain competitive in the biopharmaceutical market to obtain and retain the services of our employees while also not encouraging executives and non-executive employees to take unnecessary or excessive risks in the achievement of goals;
- we believe that our compensation program balances short and long-term performance and does not place inappropriate focus on achieving short-term results at the risk of long-term, sustained performance;
- all incentive plan designs and specific elements are reviewed and approved by the compensation committee annually;
- performance targets for the annual performance plan, which covers all named executives and most employees, are established annually by our compensation committee and the board. We have internal controls over the measurement and calculation of these performance metrics, designed to prevent manipulation of results by any employee, including our executives. Additionally, the compensation committee and the board monitor the corporate performance metrics formally no less than annually and periodically on a more informal basis during the year;
- the compensation committee has the discretion to increase or decrease any plan payment upwards or downwards, allowing the compensation committee to consider the circumstances surrounding corporate and/or individual performance and adjust payments accordingly;
- there are appropriate internal controls over the processing of payments;
- our existing governance and organizational structure incorporates a substantial risk management component through the review and actions of the board and its standing committees; and
- the long-term component of compensation consists of restricted stock units and stock option grants. Our primary long-term incentive grants are stock options, which would only have value if our stock price increases subsequent to the date of grant. Vesting requirements of three to four years encourage employees to take a long-term perspective on overall corporate performance, which ultimately influences share price appreciation. We believe that long-term equity compensation balances the cash incentives in place to motivate short-term performance.

**Compensation Committee Interlocks and Insider Participation**

During 2010, Christopher Garabedian, M. Kathleen Behrens, John Hodgman, Michael Casey, K. Michael Forrest and William Goolsbee served on our compensation committee. In December 2010, in connection with Christopher Garabedian's acceptance of an offer to serve as our President and Chief Executive Officer, the board of directors appointed William Goolsbee to replace Mr. Garabedian as the

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chairman and member of the compensation committee. From March 2007 to February 2008, Mr. Forrest served as our Interim Chief Executive Officer. With the exception of Mr. Forrest, during 2010, no member of our compensation committee was an officer or employee or formerly an officer of our company, and no member had any relationship that would require disclosure under Item 404 of Regulation S-K of the Securities Exchange Act of 1934. None of our executive officers has served on the board of directors or the compensation committee (or other board committee performing equivalent functions) of any other entity, one of whose executive officers served on our board of directors or on our compensation committee.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters.**

The following table sets forth certain information regarding the ownership of our common stock as of April 18, 2011, with respect to: (i) each person known by us to beneficially own more than 5% of the outstanding shares of our common stock, (ii) each of our directors, (iii) each of our named executive officers and (iv) all directors and executive officers as a group:

<u>Name and Address of Beneficial Owner (1)</u>	<u>Amount and Nature of Beneficial Ownership (# of Shares)(2)</u>	<u>Percent of Class (2)</u>
<b>Officers and Directors</b>		
J. David Boyle II(3)	546,950	*
Anthony Chase(4)	546,467	*
Stephen Shrewsbury, M.D.(5)	420,000	*
Leslie Hudson, Ph.D.	—	*
Paul Medeiros(6)	605,000	*
Gil Price, M.D.(7)	247,732	*
M. Kathleen Behrens, Ph.D.(8)	165,000	*
Christopher Garabedian (9)	145,000	*
John Hodgman(10)	133,334	*
William Goolsbee (11)	99,750	*
Hans Wigzell, M.D., Ph.D.(12)	95,000	*
Graham Johnson, Ph.D.	—	*
Peter Linsley, Ph.D.	—	*
Effie Toshav	—	*
All directors and officers as a group (13 persons)(13)	3,004,233	2.2%
<b>5% Shareholders</b>		
George W. Haywood(14) c/o Moomjian, Waite & Coleman, LLP 100 Jericho Quadrangle, Suite 225 Jericho, New York 11753	7,846,499	5.8%
Rockall Emerging Markets Master Fund Limited(15) c/o M&C Corporate Services Limited P.O. Box 309GT Uglund House, South Church Street, George Town, Grand Cayman, Cayman Islands	8,423,530	6.2%
BlackRock, Inc.(16) 40 East 52nd Street New York, NY 10022	6,945,871	5.1%

\* Less than one percent

(1) Except as otherwise indicated, the address of each shareholder identified is c/o AVI BioPharma, Inc., 3450 Monte Villa Parkway, Suite 101, Bothell, Washington 98021. Except as indicated in the other footnotes to this table, each person named in this table has sole voting and investment power with respect to all shares of stock beneficially owned by that person.

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- (2) Beneficial ownership is determined in accordance with rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options and warrants currently exercisable or convertible, or exercisable or convertible within sixty (60) days of April 18, 2011, are deemed beneficially owned and outstanding for computing the percentage of the person holding such securities, but are not considered outstanding for computing the percentage of any other person. Based on 135,564,651 shares of common stock issued and outstanding as of April 18, 2011.
- (3) Includes 476,668 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (4) Includes 15,000 shares subject to options exercisable within sixty (60) days of April 18, 2011 and 140,000 shares subject to currently exercisable warrants.
- (5) Includes 360,000 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (6) Includes 605,000 shares subject to options exercisable within sixty (60) days of April 18, 2011. Pursuant to the terms of a separation and release agreement that we expect to enter into with Mr. Medeiros in connection with the termination of his employment, all unvested options will immediately vest and be exercisable for a period of 180 days following June 1, 2011, the effective date of termination.
- (7) Includes 84,750 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (8) Includes 60,000 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (9) Includes 15,000 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (10) Includes 123,334 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (11) Includes 84,750 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (12) Includes 95,000 shares subject to options exercisable within sixty (60) days of April 18, 2011.
- (13) Includes 1,919,502 shares subject to options exercisable within sixty (60) days of April 18, 2011 and 140,000 shares subject to currently exercisable warrants.
- (14) Based solely on information contained in a Schedule 13G/A filed on February 14, 2011 by George W. Haywood, which reported (i) sole voting and dispositive power as to 7,146,499 shares, which amount includes 2,180,673 shares subject to currently exercisable warrants and 153,060 shares owned by Mr. Haywood's minor children, and (ii) shared voting and dispositive power as to 700,000 shares held by Mr. Haywood's spouse.
- (15) Based solely on information contained in a Schedule 13G/A filed on February 14, 2011 by Rockall Emerging Markets Master Fund Limited (the "Fund"), Meldrum Asset Management, LLC (the "Investment Manager"), Con Egan ("Egan"), Conor O'Driscoll ("O'Driscoll") and Fulvio Dobrich ("Dobrich" and together with Egan and O'Driscoll, the "Managers"), who are collectively referred to as the "Reporting Persons." The Managers are the principals of the Investment Manager, which is the investment manager of the Fund. In the aggregate, the Reporting

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Persons beneficially owned 8,423,530 shares. The beneficial ownership of each Reporting Person was as follows: (i) the Fund beneficially owned 5,589,175 shares, which amount includes 631,034 shares subject to currently exercisable warrants, (ii) the Investment Manager, as the manager of the Fund, beneficially owned 5,589,175 shares, which amount includes 631,034 shares subject to currently exercisable warrants, (iii) Egan, both as a Manager and in his individual capacity, beneficially owned 6,739,175 shares, (iv) O'Driscoll, both as a Manager and in his individual capacity, beneficially owned 6,114,066 shares, and (v) Dobrich, both as a Manager and in his individual capacity, beneficially owned 6,748,639 shares, which amount includes 105,264 shares subject to currently exercisable warrants. Each of the Fund and the Investment Manager, as the manager of the Fund, has the power to vote and dispose of the shares beneficially owned by the Fund. Each of the Managers, by virtue of his position as a principal of the Investment Manager, has the shared authority to vote and dispose of all of the shares held by the Fund, as well as the sole power to vote and dispose of shares held in his individual capacity.

(16) Based solely on information contained in a Schedule 13G filed on February 2, 2011 by BlackRock, Inc.

### Equity Compensation Plan Information

The following table summarizes information, as of December 31, 2010, with respect to shares of our common stock that may be issued under our existing equity compensation plans:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (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 security holders (1)	8,490,055	\$ 2.14	1,771,426
Equity compensation plans not approved by security holders	—	—	—
Total	8,490,055	N/A	1,771,426

(1) The number of securities remaining available for future issuance under equity compensation plans includes shares from our 2002 Equity Incentive Plan (the "2002 Plan"). The number of shares reserved for issuance is increased by an automatic annual share increase pursuant to which the number of shares available for issuance under the 2002 Plan automatically increases on the first trading day of each year (the "First Trading Day"), beginning with 2003 and continuing through 2011, by an amount equal to 2% of the total number of shares outstanding on the last trading day of the immediately preceding year, subject to certain limitations set forth in the 2002 Plan. On January 3, 2011, pursuant to the terms of the 2002 Plan, 2,247,049 additional shares of common stock were added to the 2002 Plan and became available for future grant.

### Item 13. Certain Relationships and Related Transactions, and Director Independence.

#### Approval of Related Party Transactions

Pursuant to the Code of Conduct, authorization from the audit committee is required for a director or officer to enter into a related party transaction or a similar transaction which could result in a conflict of interest. Conflicts of interest are prohibited unless specifically authorized in accordance with the Code of Conduct. We are not aware of any related party transactions during the last fiscal year that would require disclosure.

### **Determination Regarding Director Independence**

The board of directors has determined that each of our current directors, except Dr. Wigzell and Mr. Garabedian, is an “independent director” as that term is defined in NASDAQ Marketplace Rule 5605(a)(2). Messrs. Casey and Forrest and Drs. Hudson and Henney served on the board of directors for part of 2010 and the board determined that each of Dr. Henney and Messrs. Casey and Forrest was an “independent director” and Dr. Hudson was not an “independent director” as that term is defined in NASDAQ Marketplace Rule 5605(a)(2). Although Mr. Forrest acted as our Interim Chief Executive Officer until February 8, 2008, under applicable NASDAQ rules he may be considered independent if the board of directors concludes that such former employment and any compensation received would not interfere with his exercise of independent judgment in carrying out his responsibilities as director. The board of directors concluded that Mr. Forrest was independent in accordance with the applicable NASDAQ rules. The non-employee members of the board generally meet in executive session at least quarterly.

The board of directors has also determined that each current member of the audit committee, the compensation committee, and the nominating and corporate governance committee meets the independence standards applicable to those committees prescribed by the NASDAQ, the SEC, and the Internal Revenue Service.

Finally, the board of directors has determined that Mr. Hodgman, the chairman of the audit committee, is an “audit committee financial expert” as that term is defined in Item 407(d)(5) of Regulation S-K promulgated by the SEC.

### **Item 14. Principal Accounting Fees and Services.**

#### **Fees Billed to Us by KPMG LLP during 2010 and 2009**

KPMG LLP has been our independent registered public accounting firm since 2002. During fiscal years 2010 and 2009, the fees for audit and others services performed by KPMG LLP were as follows:

##### ***Audit Fees***

Fees and related expenses for the 2010 and 2009 audits by KPMG LLP of our annual financial statements, its review of the financial statements included in our quarterly reports and other services that are provided in connection with statutory and regulatory filings totaled \$330,000 and \$302,000, respectively. This represents a 9% annual increase in audit fees.

##### ***Audit-Related Fees***

For the years 2010 and 2009, KPMG LLP billed us \$16,000 and \$94,800, respectively, for audit-related fees. The 2010 audit-related fees were related to an audit of our 401(k) plan. The 2009 audit-related fees were comprised of \$78,800 related to the issuance of comfort letters and \$16,000 related to an audit of our 401(k) plan.

##### ***Tax Fees***

For the years 2010 and 2009, KPMG LLP did not bill us for any tax-related professional services.

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*All Other Fees*

For the years 2010 and 2009, KPMG LLP did not bill us for any other professional services.

**Policy on Audit Committee Pre-Approval of Fees**

The audit committee must pre-approve all services to be performed for us by KPMG LLP. Pre-approval is granted usually at regularly scheduled meetings of the audit committee. If unanticipated items arise between regularly scheduled meetings of the audit committee, the audit committee has delegated authority to the chairman of the audit committee to pre-approve services, in which case the chairman communicates such pre-approval to the full audit committee at its next meeting. The audit committee also may approve the additional unanticipated services by either convening a special meeting or acting by unanimous written consent. During 2010 and 2009, all services billed by KPMG LLP were pre-approved by the audit committee in accordance with this policy.

**PART IV**

**Item 15. Exhibits, Financial Statement Schedules.**

(a) The following documents are filed as part of this Annual Report on Form 10-K:

*(1) Financial Statements*

The financial statements of the Company are contained in Item 8 of the annual report on Form 10-K filed with the Securities and Exchange Commission on March 15, 2011.

*(2) Financial Statement Schedules*

All schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

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*(3) Exhibits*

The following exhibits are filed herewith and this list is intended to constitute the exhibit index:

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporated by Reference to Filings Indicated</u>				
		<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>
31.1	Certification of Christopher Garabedian, President and Chief Executive Officer, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of J. David Boyle II, Chief Financial Officer, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X

(b) Exhibits.

The exhibits listed under Item 15(a)(3) hereof are filed as part of this report.

(c) Financial Statement Schedules.

All schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

**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.

Dated: May 2, 2011

AVI BIOPHARMA, INC.

By: /S/ CHRISTOPHER GARABEDIAN  
Christopher Garabedian  
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/S/ CHRISTOPHER GARABEDIAN</u> Christopher Garabedian	President, Chief Executive Officer and Director (Principal Executive Officer)	May 2, 2011
<u>/S/ J. DAVID BOYLE II</u> J. David Boyle II	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	May 2, 2011
<u>*</u> William Goolsbee	Chairman of the Board	May 2, 2011
<u>*</u> M. Kathleen Behrens, Ph.D.	Director	May 2, 2011
<u>*</u> Anthony Chase	Director	May 2, 2011
<u>*</u> John C. Hodgman	Director	May 2, 2011
<u>*</u> Gil Price, M.D.	Director	May 2, 2011
<u>*</u> Hans Wigzell, M.D., Ph.D.	Director	May 2, 2011

\*By: /S/ CHRISTOPHER GARABEDIAN  
Christopher Garabedian  
Attorney-in-fact

## CERTIFICATION

I, Christopher Garabedian, certify that:

1. I have reviewed this Amendment No. 1 to the annual report on Form 10-K/A of AVI BioPharma, Inc., (the "Registrant");
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. The Registrant's other certifying officer and I are 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 our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us 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 our 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 our 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. The Registrant's other certifying officer and I have disclosed, based on our 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.

May 2, 2011

/s/ Christopher Garabedian

Christopher Garabedian  
President and Chief Executive Officer

## CERTIFICATION

I, J. David Boyle II, certify that:

1. I have reviewed this Amendment No. 1 to the annual report on Form 10-K/A of AVI BioPharma, Inc., (the "Registrant");
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. The Registrant's other certifying officer and I are 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 our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us 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 our 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 our 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. The Registrant's other certifying officer and I have disclosed, based on our 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.

May 2, 2011

/s/ J. David Boyle II

J. David Boyle II,  
Senior Vice President and Chief Financial Officer