

NANOGEN INC  
Form 10-K/A  
April 29, 2008

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

**FORM 10-K/A**

(Amendment No. 1)

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

For the fiscal year ended December 31, 2007

OR

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

For the transition period from to

Commission File Number 000-23541

**NANOGEN, INC.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of

incorporation or organization)

**33-0489621**  
(I.R.S. Employer

Identification No.)

**10398 Pacific Center Court, San Diego, CA**  
(Address of principal executive offices)

**92121**  
(Zip code)

**Registrant's telephone number, including area code: (858) 410-4600**

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

Title of Class	Name of Exchange on Which Registered
Common Stock \$0.001 par value	NASDAQ Global Market, Inc.
Preferred Stock Purchase Rights	

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer

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 stock held by non-affiliates of the registrant based upon the closing sale price of the common stock on June 30, 2007 (the last day of the registrant's most recently completed second fiscal quarter), as reported on the Nasdaq Global Market was approximately \$92,888,653. For purposes hereof, directors, executive officers and 10% or greater shareholders have been deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the registrant's common stock was 73,403,135 as of April 7, 2008.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2007 filed with the Securities and Exchange Commission, or the SEC, on March 31, 2008 are incorporated by reference into Part III of this Annual Report on Form 10-K.

**EXPLANATORY NOTE**

This Amendment No. 1 on Form 10-K/A (this Amendment) amends the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, originally filed on March 31, 2008 (the Original Filing). The Registrant is refiling Part III to include the information required by Items 10, 11, 12, 13 and 14 of Part III within the period required by General Instruction G(3) to Form 10-K. In addition, in connection with the filing of this Amendment and pursuant to the rules of the SEC, the Registrant is including with this Amendment certain currently dated certifications. Except as described above, no other changes have been made to the Original Filing.

## PART III

**Item 10. Directors, Executive Officers and Corporate Governance**  
**Executive Officers of the Company**

The names of and certain biographical information of our current executive officers are as follows:

Name	Age	Position
Howard C. Birndorf	58	Chairman and Chief Executive Officer
David Ludvigson	57	President and Chief Operating Officer
Nicholas J. Venuto	38	Chief Financial Officer
Graham Lidgard	60	Senior Vice President, Research and Development
William L. Respass	69	Senior Vice President, General Counsel, Secretary

*Howard C. Birndorf.* Mr. Birndorf, a founder of Nanogen, has served as our Chairman of the Board since October 1993. From 1993 to April 2001 he served as Chief Executive Officer, from April 2001 to December 2002 he served as Executive Chairman, and since December 2002 he has served as Chief Executive Officer. Mr. Birndorf also served as our President, from January 2000 to September 2000, and as Chief Financial Officer, from December 1997 to July 1998 and from September 1993 to October 1997. Mr. Birndorf was a co-founder and Chairman Emeritus of Ligand Pharmaceutical Incorporated, where from January 1988 to November 1991 he was President and Chief Executive Officer. He was also a co-founder, director and Executive Vice President of Gen-Probe Incorporated, co-founder and Vice President of Corporate Development at Hybritech Incorporated, co-founder and director of IDEC Pharmaceuticals Corporation, and was involved in the formation of Gensia Pharmaceuticals, Inc. (currently known as SICOR Inc.) where he was a director. From November 1991 to January 1993, Mr. Birndorf was President of Birndorf Technology Development, an investment and consulting company, and a founding director of Neurocrine Biosciences, Inc. He is a founding investor of Kiyon, Inc., chairman of the board of FasTraQ, Inc. and HA Cell Technology, and serves on the advisory board of Scripps Clinic-Green Hospital. In addition, Mr. Birndorf is currently a member of the Board of Directors of Jurilab, Ltd. He received the Life Sciences Legend award at bioFusion 2002. Mr. Birndorf received a B.A. in Biology from Oakland University and an M.S. in Biochemistry from Wayne State University. Mr. Birndorf received honorary Doctor of Science degrees from Oakland University and Wayne State University.

*David G. Ludvigson.* In June of 2004, Mr. Ludvigson was appointed to his current position of President and Chief Operating Officer. Mr. Ludvigson joined Nanogen full-time in May 2003 as Executive Vice President, Chief Financial Officer and Treasurer. Mr. Ludvigson was a director of Nanogen from 1996 until June 2003. Prior to joining Nanogen, he was President and Chief Executive Officer of Black Pearl, Inc. ( Black Pearl ), an event-based business intelligence software company, from November 2001 until January, 2003. Prior to Black Pearl, from August 2000 to January 2001, Mr. Ludvigson was President of InterTrust Technologies, a digital rights management software company. Prior to joining InterTrust Technologies, Mr. Ludvigson was a Senior Vice President and Chief Operating Officer of Matrix Pharmaceuticals, Inc. ( Matrix ) from October 1999 to August 2000. In addition, from 1998 to August 2000 he was also the Chief Financial Officer of Matrix. From February 1996 to June 1998, Mr. Ludvigson was President and Chief Operating Officer of NeTpower. From 1992 to 1995, Mr. Ludvigson was Senior Vice President and Chief Financial Officer of IDEC Pharmaceuticals. Prior to that time, he served as Senior Vice President of Sales and Marketing for Conner Peripherals and as Executive Vice President, Chief Financial Officer and a director of MIPS Computer Systems, Inc., a RISC microprocessor developer and systems manufacturer. Mr. Ludvigson is also a Director of Jurilab, Ltd., HX Diagnostics and Kiyon, Inc. Mr. Ludvigson received a B.S. and an M.A.S. from the University of Illinois.

*Nicholas J. Venuto.* Mr. Venuto joined Nanogen in June 2003 as director of finance and was appointed the Chief Financial Officer effective in February 2008. He has over fifteen years of experience in finance, primarily focused in the life science and technology industries. Prior to joining the Company and since January 2000, he held various senior finance and accounting roles at Graviton, Inc., most recently Vice President, Finance and

Corporate Secretary. From 1992 through 2000, Mr. Venuto served as a financial auditor for Ernst & Young LLP. He received a Bachelor of Accounting degree from University of San Diego and is a Certified Public Accountant.

*Graham Lidgard, Ph.D.* Dr. Lidgard joined Nanogen as Senior Vice President, Research and Development, in January 2003 and has over 28 years of experience in the Clinical Diagnostics industry. He was previously vice president of research and development at Gen-Probe from January 1995 to June 2002 where he led the R&D organization to develop DNA probe products for blood screening and STD s as well as the fully automated probe system, TIGRIS. Prior to Gen-Probe he was a co-founder of Matritech Inc., a cancer diagnostics company in Massachusetts which he joined in January 1988, and held several positions with Coming Medical/Ciba Coming from July 1977 to January 1988 including program management, business development, marketing, technology acquisition and product development. Dr. Lidgard received his Ph.D. and B.S. in Biological Chemistry from the University of Manchester.

*William L. Respass, Ph.D., J.D.* Dr. Respass joined Nanogen as Senior Vice President, General Counsel, and Secretary, in April 2004 and has more than three decades of biotechnology experience in intellectual property, licensing and general corporate law. His experience includes positions as Vice President and General Counsel of AME from 2002 to 2004, Senior Vice President and General Counsel of Graviton Incorporated from 2000 to 2002, Senior Vice President and General Counsel of Ligand Pharmaceuticals Incorporated from 1988 to 2000, Vice President and General Counsel of Gen-Probe Incorporated from 1986 to 1988, Vice President and General Counsel of Hybritech Incorporated from 1983 to 1986 and Partner of Lyon & Lyon LLP, a leading intellectual property law firm. He received his J.D. from George Washington University and served as Law Clerk and Technical Advisor to the Honorable J. Lindsay Almond, Jr., on the United States Court of Customs and Patent Appeals. Dr. Respass also earned a Ph.D. in Organic Chemistry from Massachusetts Institute of Technology and a B.S. degree in Chemistry from Virginia Military Institute. He is a member of the American Intellectual Property Law Association and has been a frequent lecturer on intellectual property and licensing law.

#### **Directors of the Company**

The names of and certain biographical information of our current external directors are as follows:

*Robert E. Whalen.* Mr. Whalen has been a director of Nanogen since April 2002. Mr. Whalen has been a Regional Vice President of Quest Diagnostics since March 2003 and prior to the acquisition of Unilab Corporation ( Unilab ) by Quest Diagnostics in February 2003, was Chief Executive Officer, President and a director of Unilab from December 1999 to February 2003. He was elected Chairman of the Board of Unilab in December 1999. From May 1997 to September 1999, Mr. Whalen served as Executive Vice President and, from September 1998 to September 1999, as Chief Operating Officer of Scripps Clinic, a 320-physician multi-specialty medical group located in Southern California. From the April 1995 merger of Roche Biomedical Laboratories and National Health Laboratories, Incorporated ( NHL ) until August 1996, Mr. Whalen served as Executive Vice President of Laboratory Corporation of America ( LabCorp ). Prior to his employment at LabCorp, Mr. Whalen held various senior level positions with NHL, which he joined in 1976. He served as Executive Vice President of NHL from 1993 to 1995, as Senior Vice President from 1991 to 1993 and as Vice President-Administration from 1985 to 1993. From 1979 to 1985, he was Vice President-Division Manager of NHL. At NHL and later at LabCorp, Mr. Whalen oversaw human resources, client service and major regional laboratories in California, Washington, Nevada and Utah.

*Stelios B. Papadopoulos.* Mr. Papadopoulos has been a director of Nanogen since October 1999. He retired in September 2001 from CN Biosciences, Inc. ( CNBI ), an affiliate of Merck KGaA, Darmstadt, Germany. From January 2001 to September 2001, Mr. Papadopoulos served as Chief Executive Officer and a director of CNBI, and CEO of Merck KGaA s North American Laboratory Business. From August 2000 to December 2000 he acted as an assistant to the General Manager of Merck KGaA s Scientific Laboratory Products Division. From January 1999 to August 2000, he served as the CEO of CNBI. From January 1993 to December 1999, he served as the Chairman and CEO of CNBI. He previously served as President of Fisher Scientific Worldwide, Inc. (now

Fisher Scientific International Inc.) from April 1988 to June 1992. From October 1987 to April 1988, he was President of Instrumentation Laboratory. Since March 2003, Mr. Papadopoulos has been serving as a director and as Chairman of the Audit Committee of US LABS, Inc. US LABS is a leading esoteric oncology and hematopathology laboratory. Mr. Papadopoulos received his B.S. in Aeronautical Engineering from Northrop Institute of Technology.

*David R. Schreiber.* Mr. Schreiber has been a director of Nanogen since June 2003. Since 2006, Mr. Schreiber has served as CEO of Atherotech, Inc., a diagnostics laboratory company focused on expanding lipid testing. . From November 1996 to July 2003, Mr. Schreiber served as the Senior Vice President, Chief Financial Officer and Secretary of Dianon Systems, Inc., a company that was acquired by the Laboratory Corporation of America ( LabCorp. ) in 2003 and from October 1999 to January, 2003, he served as a director of Dianon. From May 1994 until November 1996, Mr. Schreiber served as Vice President/General Manager-Midwest Region for Corning Clinical Laboratories, which is now Quest Diagnostics. From May 1990 to May 1994, he served as Vice President, Finance & Administration at Unilab Corporation and from August 1986 to May 1990 he served as Regional Controller of the Midwest Region of Corning Clinical Laboratories. Mr. Schreiber received his B.S. in Finance with a minor in Economics in 1982 and his MBA in 1984 from Northern Illinois University.

*Heiner Dreismann.* Dr. Dreismann has been a director of Nanogen since October 31, 2006. Since 2006 Dr. Dreismann has served as the Chief Executive Officer of FasTraq, Inc. From 2000 to 2006, prior to joining the Company, he served as President and Chief Executive Officer of Roche Molecular Systems, Inc., an affiliate of the Roche Group. Dreismann held a number of additional positions at Roche, including head of global business development, head of business unit PCR Europe, and head of business unit microbiology, all for Roche Diagnostics. Dr. Dreismann received his M.A. in biology and his Ph.D. in microbiology/molecular biology both from Westfälische Wilhelms University in Munster, Germany.

#### **Company Code of Business Conduct and Ethics**

We have adopted a Code of Business Conduct and Ethics, a code of ethics that applies to all employees, consultants and agents including our executive officers and directors. A copy of the Code of Business Conduct and Ethics is posted on our Internet site at [www.nanogen.com](http://www.nanogen.com). In the event we make any amendments to, or grant any waivers of, a provision of the Code of Business Conduct and Ethics that applies to the principal executive officer, principal financial officer, or principal accounting officer that requires disclosure under applicable SEC rules, we intend to disclose such amendment or waiver on our website at [www.nanogen.com](http://www.nanogen.com).

#### **Item 11. *Executive Compensation* Compensation Discussion and Analysis**

*Introduction.* It is our intent in this Compensation Discussion and Analysis to inform our shareholders of the policies and objectives underlying the compensation programs for our executive officers. Accordingly, we will address and analyze each element of the compensation provided to our chief executive officer, our chief financial officer and the other executive officers named in the Summary Compensation Table which follows this discussion. We are engaged in a very competitive industry, and our success depends upon our ability to attract and retain qualified executives through competitive compensation packages. The Compensation Committee of our board of directors administers the compensation programs for our executive officers with this competitive environment in mind. However, we believe that the compensation paid to our executive officers should also be substantially dependent on our financial performance and the value created for our shareholders. For this reason, the Compensation Committee also utilizes our compensation programs to provide meaningful incentives for the attainment of our short-term and long-term strategic objectives and thereby reward those executive officers who make a substantial contribution to the attainment of those objectives.

In 2006, the Compensation Committee undertook a comprehensive review of the compensation programs in effect for our executive officers in order to assess the competitiveness of those programs and to align such compensation with the longer term interests of our shareholders. In conducting this review, the Compensation Committee relied significantly on the work of Frederic W. Cook & Co ( FWC ), an independent compensation consulting firm engaged directly by the Compensation Committee. FWC reviewed all of the compensation programs in effect for our executive officers, including the compensation and benefits provided under their employment agreements. For purposes of measuring the competitiveness of the various elements of compensation provided under such programs and employment agreements, the Compensation Committee relied primarily on compensation data derived by FWC from the most current proxy statements of an identified peer group comprised of fourteen small-cap diagnostics companies. The 14 companies within such peer group were as follows:

Biosite, Inc.	Solexa, Inc.
Molecular Devices Corp.	EXACT Sciences Corporation
Digene Corporation	BioVeris Corporation
Stratagene	Third Wave Technologies
Quidel Corporation	Luminex Corporation
Caliper	Monogram Biosciences, Inc.
Cepheid	Clinical Data, Inc.

For supplemental market data, the Compensation Committee also reviewed in 2006 and in 2007 the Radford Biotechnology survey of executive officer compensation levels at companies with 150-to-500 employees within our industry as well as those in similar industries that compete with us for executive talent. While some changes resulting from this comprehensive review were made in 2006, such as the award of stock option grants with performance-milestone vesting, the recommendations the Compensation Committee received from FWC were primarily implemented in connection with the compensation programs established for the 2007 fiscal year, as described below.

**Compensation Policy for Executive Officers.** We have designed the various elements comprising the compensation packages of our executive officers to achieve the following objectives:

attract, retain, motivate and engage executives with superior leadership and management capabilities,

provide an overall level of compensation to each executive officer which is externally competitive, internally equitable and performance-driven, and

ensure that total compensation levels are reflective of our financial performance and provide the executive officer with the opportunity to earn above-market total compensation for exceptional business performance.

Each executive officer's compensation package typically consists of three elements: (i) a base salary, (ii) a cash bonus based upon participation in a bonus pool tied to our attainment of pre-established financial objectives and, where appropriate, the individual officer's personal performance, and (iii) participation in long-term, stock-based incentive awards, in the form of stock options and restricted stock unit awards, designed to align and strengthen the mutuality of interests between our executive officers and our shareholders. In determining the appropriate level for each element of such compensation, the Compensation Committee has generally followed the practice of setting the compensation levels for our executive officers between the fiftieth and the seventy-fifth percentiles of the compensation levels in effect for comparable positions of the peer group companies. However, the Compensation Committee also takes into account the Company's overall financial performance and its evaluation of each executive officer's individual performance level and his or her potential contribution to the Company's future growth. Accordingly, an executive officer's actual compensation may be higher or lower than the targeted fiftieth to seventy-fifth percentile range for his or her position. Consistent with our philosophy of emphasizing pay for performance, the overall objective of the cash compensation programs for our executive officers is to pay above the target when the Company exceeds its goals and below the target when the Company does not achieve its goals.

*Officer Employment Agreements.*

In February, 2007 we entered into a series of employment agreements with our executive officers. Some of those agreements were in the form of an amendment and restatement of their existing employment agreements with us. The remaining agreements were intended to formalize the terms of the original offer letters which certain of our officers received from us in lieu of employment agreements and to adjust their individual compensation packages to assure that the elements of compensation provided to each of our executive officers remain uniform and consistent. For purposes of measuring the competitive levels of the various elements of our executive officer employment agreements, the Compensation Committee relied primarily on the peer group compensation data provided by FWC.

Under our prior agreements with our executive officers, certain benefits were triggered upon the occurrence of a change of control event. Based on the recommendations of FWC, the 2007 employment agreements impose a double-trigger requirement (change in control and an involuntary termination) for the payment of change in control benefits. The double trigger severance benefits under the 2007 agreements are larger than those that were previously in effect under the single trigger agreements and require the executive to execute a general release. Those severance benefits include includes 12 months (24 months for Mr. Birndorf, and 18 months for Mr. Ludvigson) of salary continuation, the accelerated vesting of outstanding equity awards, a pro-rated bonus and continued health care coverage at our expense for a designated period. A limited tax gross-up payment will be provided to compensate the executive officer for the portion of any parachute tax he or she may incur as a result of the accelerated vesting of his or her pre-December 2006 equity awards, but the 2007 agreements do not extend this tax gross-up payment to awards made after December 2006 or to the other benefits provided under the employment agreements.

For termination situations which are not associated with a change in control, the basic severance benefits are in the form of salary continuation and medical coverage over a six-month period (eighteen months for Mr. Birndorf). In addition, 50% of Mr. Respass' unvested stock options will vest on an accelerated basis.

We believe that the change from single trigger to double trigger agreements and enhancement of the double trigger severance package is fair and reasonable in consideration of the dedication and commitment that the executive officers have rendered us over their years of service and the value we expect to receive from retaining their services prior to, and during, what we believe would be a complex and challenging transition period following a change of control transaction. The acceleration of their outstanding equity awards is also appropriate in our view, because those awards are designed to serve as the primary vehicle for the executive officers to accumulate financial resources for retirement. We do not provide our executive officers with any defined benefit pension plans or supplemental executive retirement plans, and the only other opportunity for the accumulation of retirement income is through the limited deferral of compensation under our 401(k) savings plan. In addition, FWC advised the Compensation Committee that the double trigger severance package provided under the 2007 employment agreements was within the competitive range of comparable severance benefits for executive officers at other companies of similar size and market capitalization.

We also believe that the employment agreements with our executive officers achieve two important goals crucial to our long-term financial success, namely, the long-term retention of our senior executives and their commitment to the attainment of our strategic objectives. The agreements will allow our participating executive officers to continue to focus their attention on our business operations and strategic plans without undue concern over their own financial situations during periods when substantial disruptions and distractions might otherwise prevail.

In December 2007, Robert Saltmarsh, the Vice President and Chief Financial Officer, notified the Company of his decision to retire at the end of February 2008. We promoted Nicholas Venuto, our then Executive Director of Finance, to the position of Vice President and Chief Financial Officer, effective in February, 2008. In connection with his promotion, the Compensation Committee increased Mr. Venuto's annual base salary from \$183,000 to \$220,000 and granted him an option to purchase 100,000 shares of the Company's common stock at



an exercise price of \$0.485 per share, the fair market value of the Company's common stock on the option grant date. The option vests in equal monthly installments over a four year period. In February 2008, we entered into a formal employment agreement with Mr. Venuto, which is substantially similar to the agreement we entered into in February 2007 with our other executive officers. For purposes of measuring the competitive level of Mr. Venuto's compensation package, the Compensation Committee relied primarily on compensation data from the Radford Group survey of executive officer compensation levels. Based on this data, the Compensation Committee concluded that Mr. Venuto's compensation was between the 10<sup>th</sup> and 25<sup>th</sup> percentile levels when compared to chief financial officer positions within the peer group.

A summary of the material terms of the officer employment agreements, together with a quantification of the severance benefits payable under those agreements to each of the executive officers named in the Summary Compensation Table and Mr. Venuto, may be found in the section of the proxy statement entitled "Executive Compensation and Other Information - Employment Contracts, Termination of Employment and Change in Control Arrangements."

**Comparative Framework.** For purposes of measuring the competitive levels of the various components of our executive officer compensation program for the 2007 fiscal year, the Compensation Committee relied primarily on the peer group data provided by FWC and, to a lesser extent, on survey data from the Radford Group survey of executive officer compensation levels at companies that are within our industry or in similar industries and are comparable in size with us and compete with us for executive talent. The Compensation Committee also reviewed the Biotech Employment Development Coalition (BEDC) survey of executive officer compensation levels at San Diego area biotech related businesses that are comparable in size and also compete with us for executive talent.

In analyzing the comparative market data, the Compensation Committee reviewed the compensation data provided by FWC, the Radford Group and BEDC surveys with respect to base salary and bonus.

It is our objective to target the various elements of the compensation package provided each of our executive officers at the following percentiles when compared to those three primary sources of comparative market data for the year:

Base Salary	Between the 50 <sup>th</sup> and 75 <sup>th</sup> Percentile
Total Cash Compensation	Between the 50 <sup>th</sup> and 75 <sup>th</sup> Percentile

**Comparative Analysis for 2007.** When compared to the peer group data provided by FWC, the elements of cash compensation provided to our executive officers for the 2007 fiscal year were at the following percentiles for most of our executive officers:

Base Salary	Between the 50 <sup>th</sup> and 75 <sup>th</sup> Percentile
Total Cash Compensation	Between the 50 <sup>th</sup> and 75 <sup>th</sup> Percentile

**Elements of Compensation.** Each of the three major elements comprising the compensation package for executive officers (salary, bonus and equity) is designed to achieve one or more of our overall objectives in fashioning a competitive level of compensation, tying compensation to the attainment of one or more of our strategic business objectives and subjecting a substantial portion of the executive officer's compensation to our financial success as measured in terms of our stock price performance. The manner in which the Compensation Committee has so structured each element of compensation may be explained as follows.

**Salary.** The Compensation Committee reviews the base salary level of each executive officer in the first quarter each year, with any salary adjustments for the year to be made retroactive to January 1 of that year. The base salary for the executive officers named in the Summary Compensation Table is determined on the basis of their level of responsibility, experience and individual performance. The Compensation Committee believes that

this component of compensation should provide a level of security and stability from year to year and not be dependent to any material extent on the Company's financial performance. In addition, each of the named executive officers has an existing employment agreement with the Company which sets a minimum annual salary, subject to periodic upward adjustment at the discretion of the Compensation Committee. The salary level for the named executive officers was increased in 2007 by 3% from the level in effect for the 2006 fiscal year based on analysis of comparable salaries and the local job market conditions. For the 2007 fiscal year, the salary levels for our executive officer group ranged from a high of \$520,000 to a low of \$258,000.

However, in order to preserve the Company's cash resources, no salary increases were affected for the 2008 fiscal year. Instead, the each of the named executive officers were granted additional stock options, as described under the heading "Long-Term Incentives" below.

**Incentive Compensation.** For the 2007 fiscal year, the Compensation Committee implemented the 2007 Executive Officer Incentive Compensation Plan (the "2007 Incentive Plan"), designed to advance our pay-for-performance policy by focusing the attention of our executive officers on the attainment of key operational objectives for the year. The plan provided all of our executive officers with a direct financial incentive in the form of a bonus award to be paid in cash, stock or a combination thereof tied to our achievement of two pre-established operational goals.

The operational goals were tied to the following measures of our financial performance for the 2007 fiscal year, weighted as indicated: revenue (30% weighting) and EBITDA (70% weighting). For each executive officer, bonus opportunities were established at threshold, target and maximum levels of attainment of each of the operational goals. Any bonuses earned on the basis of the attained levels were to be paid from a bonus pool in a dollar amount not to exceed \$1,236,000 for the 2007 fiscal year.

The various levels of attainment established for the revenue and EBITDA operational goals for the 2007 fiscal year (the "2007 Operational Goals") were as follows:

	Threshold	Target	Maximum
Revenue (\$ in millions)	37.5	43.2	48.5
EBITDA (\$ loss in millions)	(25.6)	(22.4)	(19.0)

The dollar amount of the potential bonus at each of the various levels of attainment of the 2007 Operational were as follows for the named executive officers:

Name	Performance Goal	Threshold (\$)	Target (\$)	Maximum (\$)
Howard Birndorf	Revenue	46,814	93,627	140,441
	EBITDA	109,232	218,463	327,695
David Ludvigson	Revenue	27,038	54,075	81,113
	EBITDA	63,088	126,175	189,263
Graham Lidgard	Revenue	8,714	17,428	26,141
	EBITDA	20,332	40,664	60,997
Larry Respass	Revenue	19,776	39,552	59,328
	EBITDA	46,144	92,288	138,432
Robert Saltmarsh	Revenue	15,450	30,900	46,350
	EBITDA	36,050	72,100	108,150

For Mr. Lidgard, our Senior Vice President, Research and Development, the Compensation Committee deemed it advisable to tie fifty percent of his bonus award to his accomplishment of specific individual performance goals. Accordingly, for Mr. Lidgard only, 50% of his target bonus under the Incentive Plan was based on company performance tied to the 2007 Operational Goals and the other 50% was tied his accomplishment of the following pre-determined individual performance objectives intended to focus his

attention on the achievement of the following product development milestones: meet the new product development plan for the NC400 microarray, real-time PCR and Point of Care businesses; meet cash flow management objectives including budgeted expenses and contract revenues; support the implementation of alternative business strategies including partnerships and OEM product opportunities.

For the purposes of determining whether the revenue and EBITDA objectives were met for the 2007 fiscal year, the Compensation Committee used the numbers we reported for financial statement purposes in accordance with generally accepted accounting principles in the U.S. ( GAAP ), adjusted for non-cash, non-recurring, extraordinary items and certain other items. The Compensation Committee's determination as to whether Mr. Lidgard's product development milestones were met was based on the input received from our Chief Executive Officer and our President and further discussions with them. In February 2008, the Compensation Committee determined that our financial performance for the 2007 year was at 51% level for the revenue goal, at 0% level for the EBITDA goal, and Mr. Lidgard's product development milestones had been partially met. Accordingly the Compensation Committee awarded incentive bonuses totaling \$146,838 from the pool. The actual 2007 bonuses were paid either in cash or in shares of our common stock at the recipient's election, with the shares of common stock to be valued at the closing price on the second trading day after the announcement of financial results for the period ended December 31, 2007.

For the 2008 fiscal year, the Compensation Committee approved the 2008 Executive Officer Incentive Compensation Plan, designed to focus the attention of our executive officers on the attainment of the following measures of our financial performance for the 2008 fiscal year, weighted as indicated: revenue (30% weighting), EBITDA (50% weighting) and Fourth Quarter EBITDA (20% weighting). For each executive officer, bonus opportunities were established for each goal at threshold, target and above-target levels of attainment, with the actual bonuses earned under such plan to be paid from a bonus pool in a dollar amount not to exceed \$1,236,000 for the 2008 fiscal year.

To ensure a smooth transition in connection with Mr. Saltmarsh's retirement from his position with the Company as Vice President and Chief Financial Officer and Mr. Venuto's promotion to such position, the Company approved a cash retention bonus in December 2007 in the amount of \$65,000 to be paid to Mr. Saltmarsh on February 28, 2008, provided he remained in the Company's employ through such date. Mr. Saltmarsh remained employed by the Company through such date and accordingly received the retention bonus.

*Long-Term Incentives.* We have structured our long-term incentive program for executive officers in the form of equity awards under our amended and restated 1997 Stock Incentive Plan. For many years stock option grants were the sole form of equity award granted to our executive officers, and we continue to use stock option grants in combination with other forms of equity awards available under the 1997 plan to provide long-term incentives to our executive officers. Each grant is designed to align the interests of the executive officer with those of the shareholders and to provide each individual with a significant incentive to manage the company from the perspective of an owner with an equity stake in the business. Each grant allows the officer to acquire shares of our common stock at a fixed price per share (the closing selling price on the grant date) over a specified period, usually ten years. Options granted in past years generally vest and become exercisable in a series of installments over a two-year period measured from the grant date, contingent upon the officer's continued employment. Accordingly, each option will provide a return to the executive officer only to the extent he remains employed with us during the vesting period, and then only if the fair market value of the underlying shares appreciates over the period between grant and exercise of the option.

We award restricted stock units ( RSUs ) as part of our long-term incentive program. We believe that RSUs are a valuable component of our long-term incentive program for several reasons, including ongoing concerns over the dilutive effect of option grants on our outstanding shares, our desire to have a more direct correlation between the FAS 123(R) compensation expense we must take for financial accounting purposes and the actual value delivered to our executive officers and other employees pursuant to an equity grant, and the fact that the

incentive effects of RSUs are less subject to market volatility than stock options. Each RSU entitles the recipient to one share of our common stock at the time of vesting without the payment of an exercise price or other consideration. The vesting of RSUs is tied to continued service with us, generally over a two-year period measured from the award date.

As part of the Company's pay for performance philosophy and in accordance with FWC's recommendation, the Compensation Committee made a special stock option award to each of our executive officers in December 2006 for the following number of shares: Mr. Birndorf, 280,000 shares; Mr. Ludvigson, 155,000 shares; Mr. Lidgard, 95,000 shares; Mr. Respass, 95,000 shares; and Mr. Saltmarsh, 95,000 shares. Each option has an exercise price per share equal to the fair market value of our common stock on the option grant date and will vest on the achievement of aggressive revenue and EBITDA targets within a five and a half year period measured from the grant date. In addition, each option contains a vesting acceleration provision pursuant to which 50% of the option will vest upon a change in control, and 100% will vest if the change in control is at a price per share of our common stock above a pre-set target price.

In February 2007, the Compensation Committee also structured the annual stock option grants to our executive officers so that vesting was tied to the attainment of pre-established performance objectives. Each option had an exercise price per share equal to the fair market value of the Company's common stock on the option grant date and would vest in whole or in part on the basis of the levels at which the 2007 Operational Goals under the 2007 Incentive Plan were attained. Any options which vested on the basis of the attained levels of the 2007 Operational Goals were subject to a further service vesting requirement over a four year period, with twenty-five percent of the option shares to vest upon the executive officer's completion of one year of service measured from the grant date, and the remaining option shares to vest monthly over the next thirty six months of continued service. To the extent the 2007 Operational Goals were not attained at the above-target levels, all or a portion of the option would be immediately forfeited at the close of the 2007 fiscal year. The number of option shares allocated to each 2007 Operational Goal was as follows for the named executive officers:

Name	Performance Goal	Threshold Number of Option Shares	Target Number of Option Shares	Above Target Number of Option Shares
Howard Birndorf	Revenue	54,750	109,500	164,250
	EBITDA	127,750	255,500	383,250
David Ludvigson	Revenue	30,000	60,000	90,000
	EBITDA	70,000	140,000	210,000
Graham Lidgard	Revenue	18,750	37,500	56,250
	EBITDA	43,750	87,500	131,250
Larry Respass	Revenue	18,750	37,500	56,250
	EBITDA	43,750	87,500	131,250
Robert Saltmarsh	Revenue	18,750	37,500	56,250
	EBITDA	43,750	87,500	131,250

Based on the Company's performance in 2007, the Compensation Committee determined that 16% of the option shares had been earned and accordingly, only the following number of option shares subject to the February 2007 option grants remain outstanding:

Name	Number of Option Shares
Howard Birndorf	21,900
David Ludvigson	12,000
Graham Lidgard	7,500
Larry Respass	7,500

Mr. Saltmarsh's employment with the Company terminated prior to any of the February 2007 option grants becoming vested and exercisable; accordingly all of his February 2007 option shares have terminated.

In determining the total number of shares to award each executive officer in the combined form of stock options and RSUs for the 2007 fiscal year, the Compensation Committee reviewed data provided by FWC, but the Compensation Committee did not seek to bring the total direct compensation (salary, bonus and equity) of each executive officer to a specific percentile of the total direct compensation for comparable positions at the peer group companies.

In March 2008, the Company's executive officers were granted performance-based stock options, subject to shareholder approval of an increase to the available reserve under the Corporation's 1997 Stock Incentive Plan. The options will terminate prior to becoming exercisable, to the extent the performance goals under the 2008 Executive Officer Incentive Compensation Plan are not attained at one or more pre-determined levels. To the extent earned, the options will vest over a four-year period, with twenty-five percent of the option shares to vest upon the executive officer's completion of one year of service measured from the grant date, and the remaining option shares to vest monthly over the next thirty six months of continued service period measured from the first anniversary of the option grant date. The maximum number of option shares that can be earned pursuant to the March 2008 grant is as follows for each executive officer: Mr. Birndorf, 547,500 shares; Mr. Ludvigson, 300,000 shares; Mr. Lidgard, 187,500 shares; Mr. Respass, 187,500 shares; and Mr. Venuto, 187,500 shares.

In March 2008, the Compensation Committee granted options for the following number of shares to each executive officer in lieu of a salary increase for the 2008 year: Mr. Birndorf, 208,547 shares; Mr. Ludvigson, 144,537 shares; Mr. Lidgard, 116,546 shares; Mr. Respass, 132,148 shares; and Mr. Venuto, 0 shares. Each option will vest in a series of 48 successive equal monthly installments over a four year period of service measured from January 1, 2008. Each option has an exercise price per share equal to the closing price of our common stock on the grant date.

**Market Timing of Equity Awards.** The Compensation Committee does not engage in any market timing of the equity awards made to the executive officers or other award recipients, and there is no established practice of timing our awards in advance of the release of favorable financial results or adjusting the award date in connection with the release of unfavorable financial developments affecting our business. It is our intent that all stock option grants have an exercise price per share equal to the closing selling price per share on the effective date of the grant.

**Executive Officer Perquisites.** It is not our practice to provide our executive officers with any meaningful perquisites. We do, however, provide Mr. Birndorf with administrative assistant services for personal matters and supplemental medical and dental coverage under the Exec-U-Care program. The dollar value of these perquisites was approximately \$37,725 for the 2007 fiscal year.

**Other Programs.** Our executive officers are eligible to participate in our 401(k) employee savings plan and our employee stock purchase plan on the same basis as all other regular U.S. employees.

**Deferred Compensation Programs.** We do not maintain any non-qualified deferred compensation programs for our executive officers or any supplemental executive retirement plans. We believe that the equity award component of each executive officer's total direct compensation package should serve as a major source of wealth creation, including the accumulation of substantial resources to fund the executive officer's retirement years.

**Compliance with Internal Revenue Code Section 162(m).** Section 162(m) of the Internal Revenue Code disallows a tax deduction to publicly held companies for compensation paid to certain of their executive officers to the extent such compensation exceeds \$1.0 million per covered officer in any year. The limitation applies only to compensation that is not considered to be performance-based under the terms of Section 162(m). The stock options granted to our executives are intended to qualify as performance based compensation. Non-performance-based compensation paid to our executive officers for 2007 did not exceed the \$1.0 million limit per officer. However, as we continue to use service-vesting restricted stock units as a component of equity compensation, it

is likely that the non-performance-based compensation payable to our executive officers will exceed the \$1.0 million limit in one or more future years. We believe that in establishing the cash and equity incentive compensation programs for our executive officers, the potential deductibility of the compensation payable under those programs should be only one of a number of relevant factors taken into consideration, and not the sole governing factor. For that reason, we may deem it appropriate to provide one or more executive officers with the opportunity to earn incentive compensation, whether through cash bonus programs tied to our financial performance or through RSUs tied to the executive officer's continued service, which together with base salary in the aggregate may be in excess of the amount deductible by reason of Section 162(m) or other provisions of the Internal Revenue Code. We believe it is important to maintain cash and equity incentive compensation at the levels needed to attract and retain the executive officers essential to our success, even if all or part of that compensation may not be deductible by reason of the Section 162(m) limitation.

### Summary Compensation Information

The following table provides certain summary information concerning the compensation earned for services rendered in all capacities to the Company and its subsidiaries for the year ended December 31, 2007 by the Company's Chief Executive Officer, Chief Financial Officer and each of the Company's three other most highly compensated executive officers whose total compensation for the 2007 year was in excess of \$100,000 and who were serving as executive officers at the end of the 2007 Fiscal Year. No other executive officers who would have otherwise been includable in such table on the basis of total compensation for the 2007 Fiscal Year have been excluded by reason of their termination of employment or change in executive status during that year. The listed individuals shall be hereinafter referred to as the named executive officers. The Company does not sponsor a pension plan or a non-qualified deferred compensation plan.

Name and Principal Position (a)	Year (b)	Salary (\$) <sup>(1)</sup> (c)	Bonus (\$) <sup>(1)</sup> (d)	Stock	Option	Non-Equity	All	Total (\$) (i)
				Awards (\$) <sup>(2)</sup> (e)	Awards (\$) <sup>(3)</sup> (f)	Incentive Plan Compensation (\$) <sup>(4)</sup> (g)	Other Compensation (\$) (h)	
Howard C. Birndorf, Chairman and Chief Executive Officer	2007	\$ 520,150		\$ 230,932	\$ 100,814	\$ 46,814	\$ 37,725 <sup>(5)</sup>	\$ 936,435
	2006	\$ 505,000		\$ 225,337	\$ 445,382	\$ 148,470	\$ 34,319	\$ 1,358,508
David G. Ludvigson, President and Chief Operating Officer	2007	\$ 360,500		\$ 115,466	\$ 422,812	\$ 27,038	\$ 5,516 <sup>(6)</sup>	\$ 931,332
	2006	\$ 350,000		\$ 112,669	\$ 600,559	\$ 85,750	\$ 4,850	\$ 1,153,828
Robert Saltmarsh, Former Vice President and Chief Financial Officer <sup>(7)</sup>	2007	\$ 257,500		\$ 57,733	\$ 185,281	\$ 15,450	\$ 6,266 <sup>(6)</sup>	\$ 522,230
	2006	\$ 250,000		\$ 56,334	\$ 206,224	\$ 49,000	\$ 6,100	\$ 567,658
William L. Respass, Senior Vice President, General Counsel and Secretary	2007	\$ 329,600		\$ 57,733	\$ 254,988	\$ 19,776	\$ 11,180 <sup>(6)</sup>	\$ 673,277
	2006	\$ 320,000		\$ 56,334	\$ 322,187	\$ 62,720	\$ 7,100	\$ 768,341
Graham Ligard, Senior Vice President, Research and Development	2007	\$ 290,600	29,046 <sup>(8)</sup>	\$ 57,733	\$ 8,485	\$ 8,714	\$ 6,266 <sup>(6)</sup>	\$ 400,844
	2006	\$ 282,000	36,660 <sup>(9)</sup>	\$ 56,334	\$ 168,115	\$ 27,636	\$ 7,100	\$ 577,845

- (1) Includes amounts deferred at the named executive officer's election under the Company's 401(k) Defined Contribution Savings and Retirement Plan, a qualified deferred compensation plan under section 401(k) of the Internal Revenue Code.
- (2) The amounts in column (e) do not reflect actual value received by the officer in 2007 and 2006, but rather reflect the dollar amount recognized for financial statement reporting purposes for the fiscal years ended December 31, 2007 and 2006, in accordance with FAS 123(R) of stock awards granted to each named executive officer and thus include amounts from awards granted in and prior to the applicable year. Assumptions used in the calculation of these amounts are included in footnote 8 to the Company's audited financial statements for the fiscal year ended December 31, 2007 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 31, 2008.
- (3) The amounts in column (f) do not reflect actual proceeds received, but rather these amounts reflect the dollar amount recognized for financial statement reporting purposes for the fiscal years ended December 31, 2007 and 2006, in accordance with FAS 123(R) of stock options granted to each named executive officer and thus include amounts from awards granted in and prior to the applicable year. Assumptions used in the calculation of this amount are included in footnote 8 to the Company's audited financial statements for the fiscal year ended December 31, 2007 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 31, 2007.

- (4) The amounts in column (g) for the 2007 fiscal year reflect the cash awards to the named executive under the Company's 2007 Executive Officer Incentive Compensation Plan which is described in detail under the heading "Incentive Compensation" on page [ ].
- (5) The amount shown includes (i) \$29,375, which represents the aggregate incremental cost to the company of administrative assistance service provided by the Company to Mr. Birndorf for his personal use, (ii) the premiums and miscellaneous expenses paid by the Company for supplemental medical and dental coverage provided to Mr. Birndorf under the Exec-U-Care program, which is in addition to the medical and dental coverage provided to all employees of the Company and (iii) the dollar value of life insurance premiums paid by the Company on behalf of Mr. Birndorf.
- (6) Includes (i) the fair market value of shares of our common stock contributed as a matching contribution by the Company to the named executive officer's account under our 401(k) Defined Contribution Savings and Retirement plan on the date the matching contribution was approved by the Compensation Committee and (ii) the dollar value of life insurance premiums paid by the Company on behalf of the named executive officer.
- (7) Mr. Saltmarsh retired from his position as Vice President and Chief Financial Officer in February 2008.
- (8) Reflects the portion of the cash award to Mr. Lidgard under the Company's 2007 Executive Officer Incentive Compensation Plan which was paid as a result of Mr. Lidgard's personal performance. The 2007 Executive Officer Incentive Compensation Plan is described in detail under the heading "Incentive Compensation" on page [ ].
- (9) Reflects the portion of the cash award to Mr. Lidgard under the Company's 2006 Executive Officer Incentive Compensation Plan which was paid as a result of Mr. Lidgard's personal performance.

## Grants of Plan-Based Awards

The following table provides certain summary information concerning each grant of an award made to a named executive officer in the 2007 Fiscal Year under a compensation plan.

Name (a)	Grant Date (b)	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards <sup>(1)</sup>			Estimated Future Payouts Under Equity Incentive Plan Awards <sup>(2)</sup>			Exercise or Base Price of Option Awards (\$/Sh) (i)	Grant Date FAS 123(R) Fair Value (\$) (j)
		Threshold (\$) (c)	Target (\$) (d)	Maximum (\$) (e)	Threshold (#) (f)	Target (#) (g)	Maximum (#) (h)		
Howard Birndorf, Chairman and Chief Executive Officer	2/16/2007	156,045	312,090	468,135					
David G. Ludvigson, President and Chief Operating Officer	2/16/2007	90,125	180,250	270,375	182,500	365,000	547,500 <sup>(2)</sup>	1.39	558,107
Robert Saltmarsh, Chief Financial Officer	2/16/2007	51,500	103,000	154,500	62,500	125,000	187,500 <sup>(2)</sup>	1.39	191,133
William L. Respass, Senior Vice President, General Counsel and Secretary	2/16/2007	65,920	131,840	197,760	62,500	125,000	187,500 <sup>(2)</sup>	1.39	191,133
Graham Lidgard, Senior Vice President, Research and Development	2/16/2007	58,092	116,184	174,276	62,500	125,000	187,500 <sup>(2)</sup>	1.39	191,133

- (1) Reflects the potential payouts under the Company's 2007 Executive Officer Incentive Compensation Plan based on Company performance during the 2007 year, and assumes that for each level of achievement each of the three operational goals were achieved at that level. The actual amounts earned under such plan are disclosed in the Summary Compensation Table in the column Non-Equity Incentive Plan Compensation.
- (2) Reflects stock options granted under the Company's 1997 Stock Incentive Plan, which vest based on the levels at which the goals under the 2007 incentive Plan were attained. Any options which vested on the basis of the attained levels of the 2007 Incentive Plan are subject to a further service vesting requirement over a four year period, with twenty-five percent of the option shares to vest upon the executive officer's completion of one year of service measured from the grant date, and the remaining option shares to vest monthly over the next thirty-six months of continued service. The actual number of option shares earned under such awards is disclosed in the Compensation Discussion and Analysis under the heading Long-Term Incentives.



**Outstanding Equity Awards at Fiscal Year-End**

The following table provides certain summary information concerning outstanding equity awards held by the Named Executive Officers as of December 31, 2007.

Name <sup>(7)</sup> (a)	Option Awards Equity Incentive Plan Awards:					Stock Awards	
	Number of Securities Underlying Unexercised Options (#) (b)	Number of Securities Underlying Unexercised Options (#) (c)	Number of Securities Underlying Unexercised Options (#) (d)	Option Exercise Price (\$) (e)	Option Expiration Date (f)	Number of Shares or Units of Stock That Have Not Vested (#) (g)	Market Value of Shares or Units of Stock That Have Not Vested (\$) <sup>(8)</sup> (h)
Howard Birndorf,  Chairman and Chief Executive Officer	25,000			4.50	1/22/2009		
	80,000			11.94	1/25/2011		
	70,000			6.00	7/26/2011		
	22,694			5.11	1/24/2012		
	127,306			5.11	1/24/2012		
	400,000			1.90	7/25/2012		
	325,000			3.45	7/17/2013		
	17,878			4.70	7/28/2014		
	282,122			4.70	7/28/2014		
	22,727			4.40	7/28/2015		
	127,273			4.40	7/28/2015		
				280,000 <sup>(1)</sup>	2.09	12/12/2016	
			547,500 <sup>(2)</sup>	1.39	2/16/2017		
						50,000 <sup>(3)</sup>	18,000
	1,500,000		827,500			50,000	18,000
David G. Ludvigson,  President and Chief Operating Officer	36,666			6.96	4/26/2011		
	10,000			8.60	6/13/2011		
	10,000			2.80	6/14/2012		
	57,970			3.45	7/18/2013		
	58,822			3.45	7/18/2013		
	96,015			3.45	7/18/2013		
	28,985			3.45	7/18/2013		
	30,210	15,105 <sup>(4)</sup>		6.62	6/1/2014		
	232,290	22,395 <sup>(4)</sup>		6.62	6/1/2014		
	150,000			4.70	7/29/2014		
	75,000			4.40	7/29/2015		
				155,000 <sup>(1)</sup>	2.09	12/12/2016	
			300,000 <sup>(2)</sup>	1.39	2/16/2017		
						25,000 <sup>(3)</sup>	9,000
	785,958	37,500	455,000			25,000	9,000

Name <sup>(7)</sup> (a)	Option Awards Equity Incentive Plan Awards:				Stock Awards		
	Number of Securities Underlying Unexercised Options (#) Exercisable (b)	Number of Securities Underlying Unexercised Options (#) Unexercisable (c)	Number of Securities Underlying Unexercised Options (#) Unearned (d)	Option Exercise Price (\$) (e)	Option Expiration Date (f)	Number of Shares or Units of Stock That Have Not Vested (#) (g)	Market Value of Shares or Units of Stock That Have Not Vested (\$) <sup>(8)</sup> (h)
Robert Saltmarsh,	24,841			4.33	9/13/2014		
	159			4.33	9/13/2014		
Former Vice President and Chief Financial Officer <sup>(6)</sup>	78,125	21,875 <sup>(4)(5)</sup>		6.21	1/5/2015		
	31,250	18,750 <sup>(4)(5)</sup>		6.21	1/5/2015		
	1,348			4.40	7/29/2005		
	36,152			4.40	7/29/2005		
			95,000 <sup>(1)(5)</sup>	2.09	12/12/2016		
			187,500 <sup>(2)(5)</sup>	1.39	2/16/2017		
						12,500 <sup>(3)(6)</sup>	4,500
	171,875	40,625	282,500			12,500	4,500
William L. Respass,	50,369	16,666 <sup>(4)</sup>		5.87	4/30/2014		
	132,965			5.87	4/30/2014		
Senior Vice President, General Counsel and Secretary	50,000			4.70	7/29/2014		
	982			4.40	7/29/2015		
	36,518			4.40	7/29/2015		
			95,000 <sup>(1)</sup>	2.09	12/12/2016		
			187,500 <sup>(2)</sup>	1.39	2/16/2017		
						12,500 <sup>(3)</sup>	4,500
	270,834	16,666	282,500			12,500	4,500
Graham Lidgard	58,139			1.72	1/14/2013		
	66,861			1.72	1/14/2013		
Senior Vice President, Research and Development	75,000			3.45	7/18/2013		
	25,000			3.45	7/18/2013		
	24,201			4.70	7/29/2014		
	75,799			4.70	7/29/2014		
	10,938			4.40	7/29/2015		
	26,562			4.40	7/29/2015		
			95,000 <sup>(1)</sup>	2.09	12/12/2016		
			187,500 <sup>(2)</sup>	1.36	2/16/2017		
						12,500 <sup>(3)</sup>	4,500
	362,500		282,500			12,500	4,500

(1) Reflects stock options granted under the Company's 1997 Stock Incentive Plan on December 12, 2006, which become vested only upon the Company's achievement of a revenue and EBITDA target within five and a half years following the option grant date. In addition, 50% of the option shares will vest on an accelerated basis upon a change in control of the Company and 100% of the option shares will vest on an accelerated basis upon a change in control of the Company if the change in control price per share is above a target price per share.

- (2) Reflects stock options which will terminate prior to becoming exercisable unless the Company achieves its goals under the 2007 Executive Officer Incentive Compensation Plan at predetermined levels. Any options which vested on the basis of the attained levels under the 2007 Executive Officer Incentive Compensation Plan, were subject to a service vesting requirement over a four year period, with twenty-five percent of the option shares to vest upon the executive officer's completion of one year of service following the option grant date, and the remaining option shares to vest monthly over the thirty six month period thereafter. Upon a change in control before December 31, 2007, 100% of the option shares would become vested and exercisable. In the event of change in control following such date, the outstanding option shares would become vested and exercisable upon the termination of the optionee under certain circumstances. Based on the Company's performance in 2007, the Compensation Committee determined in February 2008 that 16% of the option shares subject to such option grants remain outstanding: Mr. Birndorf, 21,900 shares; Mr. Ludvigson, 12,000 shares; Mr. Lidgard, 7,500 shares; Mr. Respass, 7,500 shares.
- (3) Reflects restricted stock units (RSU's) granted under the Company's 1997 Stock Incentive Plan, which entitle the recipient to one share of our common stock at the time of vesting without the payment of an exercise price or other consideration. The RSU's become vested in twenty-four equal monthly installments over the two year period commencing on December 12, 2006, provided the executive officer remains in our employ through each such date. 50% of the vested shares became issuable on December 12, 2007 and the remaining 50% of the vested shares will become issuable on December 12, 2008, however the RSU's will become vested on an accelerated basis in the event of the executive's involuntary termination within 24 months following a change in control.
- (4) Options vest over a four year period of service with the Company measured from the grant date, with 25% of the option shares vesting after twelve months of service and the balance vesting monthly thereafter. Each option shall become fully vested and exercisable upon a change in control of the Company. The options held by the named executive officers that vest in accordance with the schedule are as follows:

Name	Option Grant Date	Total Number of Shares Granted	Number of Shares Exercised Before January 1, 2008
David G. Ludvigson, President and Chief Operating Officer	6/1/2004 6/1/2004	45,315 254,685	
Robert Saltmarsh, Former Vice President and Chief Financial Officer	1/5/2005 1/5/2005	100,000 50,000	
William L. Respass,  Senior Vice President, General Counsel and Secretary	4/30/2004	67,035	

- (5) In connection with his resignation in February 2008, Mr. Saltmarsh forfeited the following unvested shares:

Expiration Date	Number of Unvested Shares as of December 31, 2007	Number of Unvested Shares Mr. Saltmarsh Forfeited Upon Termination
1/5/2015	21,875	21,875
1/5/2015	18,750	18,750
12/12/2016	95,000	95,000
2/16/2017	187,500	187,500

- (6) In connection with his resignation in February 2008, Mr. Saltmarsh forfeited 10,417 of the 12,500 unvested restricted stock units identified in the table above.
- (7) Each executive officer's outstanding equity awards contain special accelerated vesting provisions, as described under the heading "employment, Severance and Change in Control Agreements."
- (8) Reflects the \$0.36 per share closing selling price of the Company's common stock on December 31, 2007.

### Option Exercises and Stock Vested

The following table sets forth for each of the named executive officers the number and value of shares of the Corporation's common stock subject to each restricted stock unit award that vested during the year ended December 31, 2007.

Name	Stock Awards	
	Number of Shares Acquired on	Value Realized on Vesting
	Vesting (#) (b)	(\$) <sup>(1)</sup> (c)
(a) Howard Birndorf, Chairman and Chief Executive Officer	50,000	20,144
David G. Ludvigson, President and Chief Operating Officer	25,000	10,072
Robert Saltmarsh, Former Vice President and Chief Financial Officer	12,500	5,036
William L. Respass, Senior Vice President, General Counsel and Secretary	12,500	5,036
Graham Lidgard, Senior Vice President, Research and Development	12,500	5,036

- (1) Value realized is determined by multiplying (i) the market price of the common stock on the applicable vesting date by (ii) the number of shares as to which each award vested on such date.

### Pension Benefits

Nanogen does not sponsor a tax-qualified defined benefit retirement plan or a supplemental executive retirement plan.

### Nonqualified Deferred Compensation

Nanogen does not sponsor a nonqualified deferred compensation plan.

### Employment, Severance and Change in Control Agreements

The following is a description of the principal provisions of the employment agreements we have entered into with our executive officers.

#### *Howard C. Birndorf*

**Term.** The amended and restated employment agreement we entered into with Howard C. Birndorf, our chief executive officer, has an initial term three-year ending on January 1, 2010, subject to automatic renewal for one or more successive one-year terms. In the event we elect not to renew the agreement, Mr. Birndorf may elect to terminate his employment and thereby become entitled to receive salary continuation payments for a period of eighteen months and continued medical coverage for himself and his eligible dependents at our expense for a period of up to eighteen months.

**Annual Compensation Package.** During the term of the employment agreement, Mr. Birndorf will be entitled to base salary at the rate of \$520,150 per year, subject to annual adjustment. He will also be entitled to an annual bonus of up to sixty percent of base salary contingent upon our achievement of performance goals determined by the Compensation Committee of our board of directors (the Achievement Bonus ).

**Change in Control Benefits.** All stock options and other equity awards granted to Mr. Birndorf prior to December 12, 2006 will vest in full in the event we experience a change in control. Any stock options or other equity awards subsequently granted to him will be subject to such accelerated vesting provisions tied to a change in control as our Compensation Committee may establish at the time of such grant. However, each outstanding stock option or other equity award will vest in full automatically upon a change in control to the extent that option or award is not assumed, continued or replaced by the successor corporation.

The 50,000 restricted stock units ( RSU s ) granted to Mr. Birndorf on December 12, 2006 will become vested on an accelerated basis in the event of the executive s involuntary termination within 24 months following a change in control.

The option grant for 280,000 shares made to Mr. Birndorf on December 12, 2006 contains special vesting acceleration provisions pursuant to which the option will automatically vest as to fifty percent of all unvested shares at the time of a change in control and will vest as to all shares if the consideration payable per share of our outstanding common stock in consummation of the change in control exceeds a certain dollar threshold.

The option grant for 280,000 shares made to Mr. Birndorf on February 16, 2007 contains special vesting acceleration provisions pursuant to which the option will automatically vest as to one hundred percent of the option shares upon a change in control before December 31, 2007. In the event of change in control following such date, the outstanding option shares would become vested and exercisable upon the termination of the optionee under certain circumstances.

**Significant Transaction Benefits.** Mr. Birndorf may also receive substantially the same change in control vesting acceleration with respect to his pre-December 12, 2006 stock options and equity awards upon the occurrence of a significant transaction effecting a change in ownership (other than a change in control) which results, in the judgment of our board of directors, in significant additional value for our stockholders, such as the addition of a major new investor group or the formation of a significant joint venture. In addition, upon the occurrence of such a significant event, Mr. Birndorf may become entitled to a special cash transaction bonus equal to one hundred and eighty percent of his then-current rate of annual base salary (the Transaction Bonus ). The Transaction Bonus will be in lieu of any Achievement Bonus for the year for which it is paid. Any such significant transaction benefits will be payable solely in the discretion of our board of directors.

**Change in Control Severance Benefits.** If Mr. Birndorf s employment is terminated by us without cause, or if he resigns by reason of a material reduction in his duties, authority and responsibilities, within twenty-four months following a change in control transaction, provided he executes a general release of claims against the company, he will become entitled to the following payments and benefits:

- (i) salary continuation payments for a period of twenty-four months;
- (ii) a pro-rated Achievement Bonus payable in a lump sum, whether or not the performance objectives for the year are attained;
- (iii) accelerated vesting of all outstanding unvested stock options and other equity awards; and
- (iv) continued medical coverage for Mr. Birndorf and his eligible dependents at our expense for up to an eighteen-month period.

**Limited Tax Gross-Up.** Stock options and other equity awards granted to Mr. Birndorf under our 1997 Stock Incentive Plan (the Plan) prior to December 12, 2006 contain a special tax gross-up provision. Accordingly, if the aggregate amount of all payments or benefits provided Mr. Birndorf under his employment agreement with us and any other plans or agreements he may have with us would subject him to the excise tax imposed by Section 4999 of the Internal Revenue Code, then he will be entitled to receive a special tax payment from us in an amount sufficient to cover the portion of that excise tax, together with interest and penalties, allocable to the pre-December 12, 2006 stock options and equity awards granted to him under the Plan, plus all income and employment taxes and additional excise taxes on that tax payment.

**Normal Severance.** Should Mr. Birndorf's employment be terminated by us without cause, or should he resign by reason of a material reduction in his powers, duties and responsibilities, either before the occurrence of a change in control transaction or more than twenty-four months following a change in control transaction, then he will become entitled to salary continuation payments for a period of eighteen months and continued medical coverage for himself and his eligible dependents at our expense for a period of up to eighteen months.

***Other Executive Officers***

The employment agreements with each of our other executive officers, namely, Messrs. Ludvigson, Lidgard, Respass, Venuto and Saltmarsh are substantially the same except as to the rate of their individual base salary and target bonus and may be summarized as follows:

**Term.** The amended and restated employment agreement we entered into with each of our other executive officers has an initial three-year term ending on January 1, 2010, subject to automatic renewal for one or more successive one-year terms. In the event we elect not to renew the agreement, the executive officer may elect to terminate his employment and thereby become entitled to receive salary continuation payments for a period of six months.

**Annual Compensation Package.** The annual rate of base salary and target bonus as a percentage of that salary is as follows for each of the executive officers:

Name	Base Salary	Target Bonus
D. Ludvigson	\$ 360,500	\$ 180,250
G. Lidgard	\$ 290,460	\$ 116,184
L. Respass	\$ 329,600	\$ 131,840
R. Saltmarsh	\$ 257,500	\$ 103,000
N. Venuto	\$ 220,000	\$ 77,000

Payment of the target bonus will be contingent upon our achievement of performance goals determined annually by the Compensation Committee of our board of directors (the Achievement Bonus).

**Change in Control Benefits.** In the event we experience a change in control, each executive officer will be entitled to the same change in control vesting acceleration benefits described above for Mr. Birndorf. In addition, as with Mr. Birndorf:

The option grants made to the executive officers on December 12, 2006 contain special vesting acceleration provisions pursuant to which the option will automatically vest as to fifty percent of all unvested shares at the time of a change in control and will vest as to all shares if the consideration payable per share of our outstanding common stock in consummation of the change in control exceeds a certain dollar threshold.

The restricted stock unit awards made to the executive officers on December 12, 2006 will become vested on an accelerated basis in the event of the executive's involuntary termination within 24 months following a change in control.

The option grants made to the executive officers on February 16, 2007 contains special vesting acceleration provisions pursuant to which the option will automatically vest as to one hundred percent of the option shares upon a change in control before December 31, 2007. In the event of change in control following such date, the outstanding option shares would become vested and exercisable upon the termination of the optionee under certain circumstances.

**Significant Transaction Benefits.** As is the case with Mr. Birndorf, each executive officer (except for Mr. Venuto) may also receive (i) the same change in control vesting acceleration benefits described above and (ii) a transaction bonus of fifty percent (one hundred percent for Mr. Ludvigson) of the executive officer's then-current rate of annual base salary upon the occurrence of a significant transaction effecting a change in ownership (other than a change in control) which results, in the judgment of our board of directors, in significant additional value for our stockholders. Any such Transaction Bonus will be in lieu of any Achievement Bonus for the year for which it is paid. However, any such significant transaction benefits will be payable solely in the discretion of our board of directors.

**Change in Control Severance Benefits.** If the executive officer's employment is terminated by us without cause, or if he resigns by reason of a material reduction in his powers, duties and responsibilities, within twenty-four months following a change in control transaction, provided he executes a general release of all claims against the Company, he will become entitled to the following payments and benefits:

- (i) salary continuation payments for a period of twelve months (eighteen months for Mr. Ludvigson);
- (ii) a pro-rated Achievement Bonus payable in a lump sum, whether or not the performance objectives for the year are attained;
- (iii) accelerated vesting of all outstanding unvested stock options and other equity awards; and
- (iv) continued medical coverage for the executive officer and his eligible dependents at our expense for up to a twelve-month period (eighteen months for Mr. Ludvigson).

**Limited Tax Gross-Up.** Stock options and other equity awards granted to the executive officer under our 1997 Stock Incentive Plan (the Plan) prior to December 12, 2006 contain a special tax gross-up provision. Accordingly, if the aggregate amount of all payments or benefits provided the executive officer under his employment agreement with us and any other plans or agreements he may have with us would subject him to the excise tax imposed by Section 4999 of the Internal Revenue Code, then he will be entitled to receive a special tax payment from us in an amount sufficient to cover the portion of that excise tax, together with interest and penalties, allocable to the pre-December 12, 2006 stock options and equity awards granted to him under the Plan, plus all income and employment taxes and additional excise taxes on that tax payment.

**Normal Severance.** Should the executive officer's employment be terminated by us without cause, or should he resign by reason of a material reduction in his authority, duties and responsibilities, either before the occurrence of a change in control transaction or more than twenty-four months following a change in control transaction, then he will become entitled to salary continuation payments for a period of six months and continued medical coverage for himself and his eligible dependents at our expense or a period of up to six months. In addition, upon a termination not associated with a change in control, 50% of Mr. Respass' unvested equity awards will become vested on an accelerated basis.

**Post-termination Exercise of Stock Options.** Stock options granted to Mr. Respass which are vested at the time of his termination of employment for any reason will remain outstanding until the 10 year anniversary of the grant date of each such option, unless exercised by Mr. Respass prior to such date.

**Quantification of Benefits**

The charts below indicate the potential payments each of our executive officers would receive based upon the following assumptions:

- (i) his employment terminated on December 31, 2007 under circumstances entitling him to severance benefits under his employment agreement,
- (ii) as to any benefits tied to the executive's rate of base salary, the rate of base salary is assumed to be the executive's rate of base salary as of December 31, 2007,
- (iii) as to any benefits tied to a change in control, the change in control is assumed to have occurred on December 31, 2007 and the change in control consideration paid per share of outstanding common stock is assumed to be equal to the closing selling price of our common stock on December 31, 2007, which was \$0.36 per share, and
- (iv) as to any benefits tied to a significant transaction, the significant transaction is assumed to occur on December 31, 2007 and our board of directors exercised its discretion to pay the maximum amount of significant transaction benefits payable under the employment agreement.

In February 2008, our Chief Financial Officer, Robert Saltmarsh, announced his retirement. Mr. Saltmarsh was not entitled to any severance benefits in connection with his resignation.

**BENEFITS RECEIVED UPON TERMINATION IN CONNECTION WITH A CHANGE IN CONTROL**

<b>Executive</b>	<b>Salary Continuation (\$)</b>	<b>Achievement Bonus (\$)</b>	<b>Accelerated Equity (\$)<sup>(1)</sup></b>	<b>COBRA (\$)</b>
Howard Birndorf	1,040,300	312,090	18,000	23,112
David Ludvigson	540,750	180,250	9,000	37,356
Graham Lidgard	290,460	116,184	4,500	18,129
Larry Respass	329,600	131,840	4,500	18,129

- (1) Represents the intrinsic value of each stock option or other equity award which vests on an accelerated basis in connection with the change in control or termination of employment and is calculated by multiplying (i) the aggregate number of equity awards which vest on such an accelerated basis by (ii) the amount by which the \$0.36 closing selling price of our common stock on December 31, 2007 exceeds any exercise price payable per vested share.

Based on the \$0.36 closing selling price of our common stock on December 31, 2007, the Company believes that no limited tax gross-up payment would have been made in connection with a change in control on December 31, 2007.

**POTENTIAL BENEFITS PAYABLE IN CONNECTION WITH A SIGNIFICANT TRANSACTION**

<b>Executive</b>	<b>Transaction Bonus (\$)<sup>(1)</sup></b>	<b>Accelerated Equity (\$)<sup>(2)</sup></b>
Howard Birndorf	936,270	18,000
David Ludvigson	360,500	9,000
Graham Lidgard	145,230	4,500
Larry Respass	164,800	4,500

- (1) Represents the maximum transaction bonus payable. If a significant transaction had actually occurred at the Company's stock price of \$0.36 on December 31, 2007, no transaction bonus would have been payable to the named executive officers.



- (2) Represents the intrinsic value of each pre-December 2006 stock option or other equity award which could potentially vest on an accelerated basis in connection with the significant transaction, and is calculated by multiplying (i) the aggregate number of pre-December 2006 equity awards which vest on such an accelerated basis by (ii) the amount by which the \$0.36 closing selling price of our common stock on December 31, 2007 exceeds any exercise price payable per vested share.

**BENEFITS RECEIVED UPON TERMINATION NOT IN CONNECTION WITH A CHANGE IN CONTROL**

	Salary Continuation	COBRA
	(\$)	(\$)
<b>Executive</b>		
Howard Birndorf	780,225	23,112
David Ludvigson	180,250	12,453
Graham Lidgard	145,230	9,064
Larry Respass	164,800	9,064

**Compensation of Directors**

The following table sets forth certain information regarding the compensation earned by or awarded to each non-employee director during the 2007 Fiscal Year who served on our Board of Directors in the 2007 Fiscal Year. The Company does not sponsor a non-equity incentive plan, a pension plan, or a non-qualified deferred compensation plan for its non-employee directors.

Name (a)	Fees Earned or			All Other	Total (\$) (f)
	Paid in Cash (\$) <sup>(1)</sup> (b)	Stock Awards (\$) <sup>(2)</sup> (c)	Option Awards (\$) <sup>(3)(4)</sup> (d)	Compensation (\$) (e)	
Heiner Dreismann	8,241	25,000	8,987 <sup>(5)</sup>	60,000 <sup>(6)</sup>	102,228
Stelios B. Papadopoulos	28,000	25,000			53,000
David Schreiber	21,982	25,000			46,982
Robert E. Whalen	20,232	25,000			45,232

- (1) Consists of the meeting fees for service as members of the Company's board of directors. For further information concerning such fees, see the section below entitled *Director Annual Retainer and Meeting Fees*.
- (2) The amounts in column (c) reflect the dollar amount recognized for financial statement reporting purposes for the fiscal year ended December 31, 2007, in accordance with FAS 123(R) of stock awards granted to each non-employee director as a retainer fee in the 2007 year. The grant date fair value of each annual retainer fee equity award granted during the 2007 fiscal year, computed in accordance with FAS 123(R), was \$25,000. The number of shares subject to such retainer fee award in 2007 was 18,116 shares. For further information concerning such fees, see the section below entitled *Director Annual Retainer and Meeting Fees*.
- (3) The amounts in column (d) do not reflect actual proceeds received, but rather these amounts reflect the dollar amount recognized for financial statement reporting purposes for the fiscal year ended December 31, 2007, in accordance with FAS 123(R) of stock options granted to each non-employee director and thus include amounts from awards granted in and prior to the 2007 year. Assumptions used in the calculation of this amount are included in footnote 8 to the Company's audited financial statements for the fiscal year ended December 31, 2007 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 31, 2008.
- (4) As of December 31, 2007 the following non-employee directors held options to purchase the following number of shares of the Company's common stock: Dr. Dreismann, 25,000 shares; Mr. Papadopoulos, 55,000 shares; Mr. Schreiber, 25,000 shares; and Mr. Whalen, 25,000 shares. The following table shows the grant date, exercise price and number of shares outstanding for each outstanding option held by a non-employee director.

Name	Grant Date	Exercise Price	Number of Option Shares Outstanding
Dr. Dreismann	10/27/06	\$ 1.95	25,000
Mr. Papadopoulos	10/29/99	\$ 7.00	25,000
Mr. Papadopoulos	6/6/00	\$ 35.00	10,000
Mr. Papadopoulos	6/13/01	\$ 8.60	10,000
Mr. Papadopoulos	6/14/02	\$ 2.80	10,000
Mr. Schreiber	6/12/03	\$ 4.07	25,000
Mr. Whalen	4/26/02	\$ 3.50	25,000

- (5) Represents the dollar amount recognized for financial statement reporting purposes for the fiscal year ended December 31, 2007, in accordance with FAS 123(R), with respect to the 25,000 share option granted to Dr. Dreismann under our 1997 Stock Incentive Plan upon Mr. Dreismann's election to the board, the terms of which are described in more detail below under the heading *1997 Stock Incentive Plan*.
- (6) Represents the aggregate amount of consulting fees paid by us in 2007 under our consulting agreement with Dr. Dreismann, the terms of which are described in more detail below under the heading *Heiner Dreismann, Ph.D. Consulting Agreement*.

*Directors Annual Retainer and Meeting Fees*

Each non-employee Board member receives an annual retainer of \$25,000 to be paid entirely in shares of our Common Stock, based on the closing stock price on the date of the Company's Annual Meeting of Stockholders. These shares are issued under our 1997 Stock Incentive Plan. Accordingly, on June 13, 2007, Messrs. Whalen, Papadopoulos, Schreiber and Dreismann each received 18,116 shares of our Common Stock. In addition, each non-employee Board member receives an annual retainer of \$1,500, to be paid entirely in cash, for each Board committee on which he or she serves and the Chairman of the Audit and Compensation Committees receive an additional annual cash retainer of \$10,000 and \$2,500, respectively, for their service on such committees. Non-employee Board members also receive the following additional cash payments: \$2,000 per Board meeting attended (\$750 per Board meeting participated in by phone) and \$750 per Board committee meeting attended or participated in by phone.

*1997 Stock Incentive Plan*

Pursuant to the 1997 Stock Incentive Plan, each non-employee Board member may elect to convert all or part of his or her annual cash retainer payments and/or meeting fees from us in the form of non-qualified stock options, restricted stock, stock units, or a combination thereof. In 2007, none of our non-employee Board members elected to convert their annual cash retainer payments and cash meeting fees into stock options, restricted stock or restricted stock units.

Upon initial appointment or election to the Board, a non-employee director will receive an option grant under our 1997 Stock Incentive Plan to purchase 25,000 shares of our Common Stock at an exercise price equal to the fair market value of the option shares on the grant date. These options vest at a rate of 25% after one year and the remainder ratably over the remaining three years. The vesting of the option shares will accelerate if there is a Change of Control as defined in the plan. Accordingly, on October 27, 2006 Mr. Dreismann received an option to purchase 25,000 shares of our Common Stock at an exercise price per share of \$1.95, the fair market value of our Common Stock on such date.

In the event any payment or benefit provided under the Company's 1997 Stock Incentive Plan to any Board member would subject that individual to the excise tax imposed by Section 4999 of the Internal Revenue Code relating to excess parachute payments, then such individual will be entitled to receive an additional payment from us in an amount equal to the amount of the excise tax imposed on such payment or benefit, together with any interest and penalties (a Gross-Up Payment) plus the income taxes and additional excise tax, together with any interest and penalties, imposed on the Gross-Up Payment.

*Heiner Dreismann, Ph.D. Consulting Agreement*

On October 1, 2006, the Company entered into an Independent Contractor Agreement for Consulting Services (the Consulting Agreement) with Dr. Dreismann, pursuant to which Dr. Dreismann agreed to provide certain technical consulting services on molecular diagnostic products and markets for the Company. In consideration for such services, the Company agreed to pay Dr. Dreismann a fee of \$10,000 for the month of October, 2006 and \$5,000 each month thereafter, provided that the total amount of payment to Dr. Dreismann under the Consulting Agreement shall not exceed \$60,000 per year without written approval by the Company.

**Compensation Committee Interlocks and Insider Participation**

The following individuals served as members of our Compensation Committee during fiscal year 2006: David Schreiber and Robert Whalen, each of whom was an independent director during fiscal year 2006. During 2006, none of our officers or employees served on the compensation committee (or equivalent) or the board of directors of another entity whose executive officer(s) served on our Compensation Committee or Board.

**Securities Authorized for Issuance under Equity Compensation Plans**

The following table provides information with respect to the shares of our Common Stock that may be issued under our existing equity compensation plans as of December 31, 2007. The table excludes information related to the outstanding options granted under our equity compensation plans where no additional options may be granted. Footnote 7 to the table sets forth the total number of shares and weight average of the exercise price of the shares excluded from this table.

**Plan Category**

	A. Number of Shares to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	B. Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	C. Number of Shares Remaining Available for Future Issuance (Excluding Securities Reflected In Column A)
Equity compensation plans approved by stockholders <sup>(1)</sup>	8,639,521 <sup>(2)</sup>	\$ 3.51 <sup>(3)</sup>	3,207,263 <sup>(4)</sup>
Equity compensation plans not approved by stockholders <sup>(5)</sup>	1,668,040	\$ 2.54	728,044 <sup>(6)</sup>
<b>Total</b>	<b>10,307,561</b>	<b>\$ 3.35</b>	<b>3,935,307</b>

(1) Consists of the Nanogen, Inc. 1998 Employee Stock Purchase Plan (the Purchase Plan), the Nanogen, Inc. Stock Bonus Plan (the Bonus Plan) and our three stock option plans: the 1993 Stock Option Plan, the 1995 Stock Option/Stock Issuance Plan and the 1997 Stock Incentive Plan.

(2) Includes 195,000 shares of our common stock subject to RSUs that will entitle each holder to one share of our common stock for each unit that vest over the holder's period of continued service. Excludes purchase rights accruing under the Employee Stock Purchase Plan which has a shareholder approved reserve of 1,600,000 shares. Under the Employee Stock Purchase Plan, each eligible employee may purchase up to 1,666 shares of Common Stock at semi-annual intervals on the last business day of June and December each year at a purchase price per share equal to 85% of the lower of (i) the closing selling price per share of Common Stock on the last trading day preceding the offering period in which that semi-annual purchase date occurs, or (ii) the closing selling price per share on the semi-annual purchase date.

(3) Calculated without taking into account 195,000 shares of our common stock subject to outstanding RSUs that will become issuable as those units vest, without any cash consideration or other payment required for such shares.



- (4) Consists of shares available for issuance under the Bonus Plan, the 1998 Employee Stock Purchase Plan, and the 1997 Stock Incentive Plan. As of December 31, 2007, 178,390 shares were available for issuance under the Bonus Plan 195,595 and 2,833,278 shares were available for issuance under the 1998 Employee Stock Purchase Plan, and 1997 Stock Incentive Plan, respectively. The 2,833,278 shares available for issuance under the 1997 Stock Plan may be issued upon the exercise of stock options or stock appreciation rights granted under the plan or those shares may be issued pursuant to direct stock bonuses or restricted stock issuances, restricted stock units or other share right awards which vest upon the attainment of prescribed performance milestones or the completion of designated service periods. The 178,390 shares available under the Bonus Plan may be issued through direct stock bonuses or pursuant to restricted stock or restricted stock unit awards which vest upon the attainment of prescribed performance milestones or the completion of designated service periods.
- (5) Consists of the Epoch Biosciences, Inc. 2003 Stock Incentive Plan. In connection with the acquisition of Epoch Biosciences, Inc., in December 2004, we assumed options to purchase 923,920 shares of Epoch Biosciences, Inc. common stock under the Epoch Biosciences, Inc. 2003 Stock Incentive Plan and converted them into options to purchase 0.4673 shares of Common Stock in accordance with the exchange ratio in effect for that acquisition. The 728,044 shares available for issuance under Epoch Biosciences, Inc. 2003 Stock Incentive Plan, as of December 31, 2007, may be issued upon the exercise of stock options or stock appreciation rights granted under the plan or those shares may be issued pursuant to direct stock bonuses or restricted stock issuances, restricted stock units or other share right awards which vest upon the attainment of prescribed performance milestones or the completion of designated service periods.
- (6) The Epoch Biosciences, Inc. 2003 Stock Incentive Plan contains a provision whereby the share reserve under the plan will automatically increase on the first business day of January each year that the plan remains in existence. The increase to the share reserve under the plan will be limited each year to 350,475 shares or such lesser number of shares as may be determined by the board. Any annual increase will be reduced to the extent necessary to ensure that the number of shares available under the plan (the shares subject to outstanding options plus the remaining unallocated shares available under the plan) does not at the time exceed 2,715,718 shares of our common stock. On January 1, 2007 the number of shares of Common Stock available for issuance under the assumed Epoch Biosciences, Inc. 2003 Stock Incentive Plan increased by 350,475 shares pursuant to the automatic share increase provisions of that plan.
- (7) The table does not include information with respect to outstanding options granted under certain equity compensation plans assumed by us in connection with mergers and acquisitions and which no additional options may be granted. As of December 31, 2007 a total of 680,612 shares of Common Stock were subject to those assumed options, and the weighted average exercise price of those assumed options was \$10.14 per share.

***The Epoch Biosciences, Inc. 2003 Stock Incentive Plan***

As of December 16, 2004, approximately 431,760 shares of Common Stock had been reserved for issuance under the Epoch Biosciences, Inc. 2003 Stock Incentive Plan (as assumed by the Company) to eligible individuals in our service or the service of our subsidiaries. Such eligible individuals include (i) employees, directors and officers of Epoch Biosciences, Inc or its subsidiaries whose service commenced prior to the December 16, 2004 date of the acquisition and (ii) employees, directors and executive officers of Nanogen or its subsidiaries (including Epoch Biosciences, Inc.) whose service commenced or commences after December 16, 2004. Awards under the assumed Epoch Biosciences, Inc. 2003 Stock Incentive Plan may be in the form of non-statutory stock option grants with an exercise price of not less than 100% of the fair market value of the Common Stock on the grant date, stock bonuses for services rendered, or stock issuances with a purchase price not less than 100% of the fair market value of the Common Stock on the award date. No option grants will have a maximum term in excess of 10 years, and each option grant or direct stock issuance will generally vest over one or more years of service. However, upon certain changes in control or ownership, those options and stock issuances may vest in whole or in part on an accelerated basis. On January 1, 2007, 2006 and 2005 the number of shares of Common Stock available for issuance under the assumed Epoch Biosciences, Inc. 2003 Stock Incentive Plan increased by 350,475 shares pursuant to the automatic share increase provisions of that plan. As of December 31, 2007 options to purchase 1,668,040 shares of Common Stock were outstanding under the assumed Epoch Biosciences, Inc. 2003 Stock Incentive Plan, 2,396,084 shares of Common Stock had been authorized under such plan, and 728,044 shares of Common Stock remained available for future issuance.

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**COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION**

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis contained in this proxy statement with management, and based on such review and such discussions, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis, as contained herein, be included in this Proxy Statement.

**Compensation Committee**

David Schreiber, Chairman

Robert Whalen

**AUDIT COMMITTEE REPORT**

The following is the report of the Audit Committee with respect to Nanogen's audited financial statements for the year ended December 31, 2007.

The purpose of the Audit Committee is to assist the Board in its general oversight of Nanogen's financial reporting, internal controls and audit functions. The Audit Committee is comprised solely of independent directors as defined by the listing standards of Nasdaq Stock Market, Inc.

The Audit Committee has reviewed and discussed the consolidated financial statements with management and Ernst & Young LLP, the Company's independent registered public accounting firm. Management is responsible for the preparation, presentation and integrity of Nanogen's financial statements; accounting and financial reporting principles; establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)); establishing and maintaining internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)); evaluating the effectiveness of disclosure controls and procedures; evaluating the effectiveness of internal control over financial reporting; and evaluating any change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, internal control over financial reporting. Ernst & Young LLP is responsible for performing an independent audit of the consolidated financial statements and expressing an opinion on the conformity of those financial statements with accounting principles generally accepted in the United States of America, as well as expressing an opinion the effectiveness of internal control over financial reporting.

During fiscal year 2007, the Audit Committee reviewed, discussed and provided input on the Company's audited consolidated financial statements contained in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007. The Audit Committee also met regularly with Ernst & Young LLP to evaluate and approve the Company's internal controls and the overall quality of the Company's financial reporting. The Audit Committee also met with the Company's Chief Executive Officer and Chief Financial Officer to discuss and act, as necessary, on accounting issues. The Audit Committee also reviewed the report of management contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2007 filed with the SEC, as well as Ernst & Young LLP's Report of Independent Registered Public Accounting Firm included in the Company's Annual Report on Form 10-K.

The Audit Committee continues to oversee the Company's efforts related to its internal control over financial reporting and management's preparations for the evaluation in 2008.

The Audit Committee has discussed with Ernst & Young LLP the matters required to be discussed by Statement on Auditing Standards No. 61, as amended, Communication with Audit Committees and PCAOB Auditing Standard No. 2, An Audit of Internal Control Over Financial Reporting Performed in Conjunction with an Audit of Financial Statements. In addition, Ernst & Young LLP has provided the Audit Committee with the written disclosures and the letter required by the Independence Standards Board Standard No. 1, as amended,

Independence Discussions with Audit Committees, and the Audit Committee has discussed with Ernst & Young LLP their firm's independence.

Based on their review of the consolidated financial statements and discussions with and representations from management and Ernst & Young LLP referred to above, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in Nanogen's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, for filing with the Securities and Exchange Commission.

#### Audit Committee

Stelios B. Papadopoulos, Chairman

David Schreiber

Robert E. Whalen

#### Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS,

##### DIRECTORS AND MANAGEMENT

The following table sets forth information as of April 7, 2008 (except as noted below) as to our shares of Common Stock beneficially owned by (i) each of our directors, (ii) each of our executive officers in the Summary Compensation Table set forth herein, (iii) our current directors and executive officers as a group and (iv) each person known by us to be the beneficial owner of more than 5% of the outstanding shares of our Common Stock. Unless otherwise indicated, the beneficial ownership consists of sole voting and investment power with respect to the shares indicated, except to the extent that a spouse shares authority under applicable law. Except for shares of common stock held in brokerage accounts, which may, from time to time together with other securities in the account, serve as collateral for margin loans made in such accounts, none of the shares reported as beneficially owned have been pledged as security for any loan or indebtedness.

	Beneficial Ownership of Common Stock <sup>(1)</sup>	
	Number of Shares	Percentage of Class
Fisher Scientific International, Inc. <sup>(2)</sup> Liberty Lane Hampton, NH 03842	5,660,377	7.7%
Howard C. Birndorf <sup>(3)</sup> c/o Nanogen, Inc. 10398 Pacific Center Court San Diego, CA 92121	2,215,552	3.0%
David G. Ludvigson <sup>(4)</sup>	911,213	1.0%
Robert Saltmarsh <sup>(5)</sup>	237,102	*
Graham Lidgard <sup>(6)</sup>	408,705	*
William L. Respass <sup>(7)</sup>	375,641	*
Robert Whalen <sup>(8)</sup>	74,399	*
Stelios Papadopoulos <sup>(9)</sup>	104,399	*
David Schreiber <sup>(10)</sup>	70,399	*
Heiner Dreisman <sup>(11)</sup>	36,124	*
All directors and executive officers as a group (9 persons) <sup>(12)</sup>	4,286,039	5.8%

\* Less than one percent.

- (1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission (the SEC), based on factors including voting and investment power with respect to shares. Percentage of beneficial ownership is based on the number of shares of the Company's common stock outstanding as of April 7, 2008. Shares of common stock issuable upon exercise of options currently exercisable, or exercisable within 60 days as of April 7, 2008 and shares of common stock issuable within 60 days as of April 7, 2008 pursuant to outstanding restricted stock units, are deemed outstanding for purpose of computing the percentage ownership of the person holding such options or restricted stock units, but are not deemed outstanding for computing the percentage ownership of any other person.
- (2) Pursuant to a Schedule 13G filed on March 15, 2006 with the SEC, Fisher Scientific International, Inc. had sole power to vote or to direct the vote of 5,660,377 shares of common stock and had sole power to dispose or to direct the disposition of 5,660,377 shares of common stock. The address of principal business office of Fisher Scientific International, Inc. is Liberty Lane, Hampton, NH 03842.
- (3) Includes 1,500,000 shares issuable upon the exercise of option within 60 days of April 7, 2008.
- (4) Includes 823,458 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (5) Includes 178,125 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (6) Includes 362,500 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (7) Includes 287,500 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (8) Includes 25,000 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (9) Includes 55,000 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (10) Includes 25,000 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (11) Includes 9,895 shares issuable upon the exercise of options within 60 days of April 7, 2008.
- (12) Includes five (5) Board members, one of whom is an executive officer, and four (4) other current executive officers.

**Item 13. Certain Relationships and Related Transactions and Director Independence**  
**CERTAIN TRANSACTIONS**

In June 2005, we signed a letter of agreement with FasTraQ, Inc. ( FasTraQ ) for the development of a certain future product. Our Chief Executive Officer and Chairman of the Board, Mr. Birmendorf, is a director and an investor in FasTraQ and our newest director, Dr. Heiner Dreismann, became CEO of FasTraQ in 2006. In October and December 2005 we amended this letter of agreement. As a result of this agreement and related amendments we made an initial non-refundable payment of \$500,000 in 2005 to begin the initial development of this product. As of December 31, 2005, we expensed the initial \$500,000. In February 2006, we converted this letter of agreement into two executed contracts, a Development and License Agreement and a Collaboration Agreement. In February 2006, we committed to provide FasTraQ up to an additional \$500,000 in funding based on certain milestones, of which \$200,000 was paid in 2006 and expensed into research and development. In February 2007, the companies terminated these agreements by mutual agreement. There were no additional funds provided to FasTraQ during 2007.

In October 2006, we signed a consulting agreement with Mr. Dreismann, one of our Board members, and the agreement was amended in November 2006, and again in September 2007. Mr. Dreismann received \$60,000 and \$20,000 in compensation under this agreement during 2007 and 2006, respectively. Total compensation under the agreement is capped at a maximum of \$5,000 per month.

On August 3, 2006, we entered into research and development collaboration arrangements with Fisher Scientific International Inc., ( Fisher Scientific ) a related party, that owns approximately 5.7 million shares of our common stock, and Athena Diagnostic, a wholly-owned subsidiary of Fisher Scientific. We agreed to share certain technology and patent rights related to the development, manufacture and marketing of new molecular diagnostic products. Under these arrangements, Fisher Scientific has the option to provide up to \$10 million in



2007 and 2008 for the research and development of infectious disease and molecular diagnostic tests that will be mutually agreed upon. These arrangements are included in non-binding general agreements, thus the obligation of the parties are subject to further negotiation and final terms of definitive collaboration agreements. On August 9, 2006, we entered into an exclusive distribution agreement with Fisher Scientific. There were approximately \$265,000 and \$42,000 of sales under this agreement in the years ended December 31, 2007 and 2006, respectively.

In February 2008, we entered into a distribution and license agreement with Fisher under which we will provide certain distribution and technology access rights to Fisher. As part of the agreement, Fisher has agreed to fund a development program related to the development, manufacture and marketing of new molecular diagnostic products on a cost incurred based. Upon commercial launch of the new products, Fisher has agreed to certain minimum purchases over a six-year period.

Consistent with the requirement under NASDAQ stock market rules, pursuant to its Charter, the Audit Committee of the Board of Directors is responsible for reviewing and approving in advance all related party transactions as defined under SEC rules and regulations. While we do not have a formal written policy or procedure for the review, approval or ratification of related party transactions, the audit committee must review the material facts of any such transaction and approve that transaction. The transactions in 2006 with FasTraQ and Fisher-Scientific were unanimously approved in advance by the disinterested members of the Board of Directors.

#### INDEPENDENCE OF THE BOARD OF DIRECTORS

Our Board of Directors has determined that each of our current directors, except for Mr. Birndorf, our Chairman of the Board and Chief Executive Officer, and Dr. Dreismann, are independent within the meaning of the applicable independence standards under NASDAQ rules. Dr. Dreismann is not independent because he is the Chief Executive Officer of FasTraQ, Inc. and in 2005 and 2006 Nanogen paid FasTraQ amounts that exceeded the greater of 5% of the revenue of FasTraQ or \$200,000. There were no payments made by Nanogen to FasTraQ during 2007.

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

The following table sets forth the aggregate fees billed to the Company for the annual audits for the fiscal years ended December 31, 2007 and 2006, and all other fees billed to the Company during 2007 and 2006 by its principal accounting firm, Ernst & Young LLP:

	For the Years Ended December 31,	
	2007	2006
	(in thousands)	
Audit Fees	\$ 1,051	\$ 770
Audit-Related Fees	211	158
Tax Fees		4
All Other Fees		
<b>Total</b>	<b>\$ 1,262</b>	<b>\$ 932</b>

The Audit Committee has determined that the rendering of all non-audit services by Ernst & Young, LLP is compatible with maintaining the auditor's independence. The fees listed under Audit Fees above were incurred for service related to the annual audit of the Company's consolidated financial statements, reviews of interim consolidated financial statements and services that are normally provided in connection with statutory and regulatory filings and engagements. In 2007, audit fees also include fees incurred for the audit of the effectiveness of internal controls over financial reporting as required under the Sarbanes-Oxley regulations. The

fees listed under **Audit-Related Fees** above were incurred for service related to accounting consultations and due diligence in connection with proposed acquisitions. The fees listed under **All Other Fees** above were incurred for service related to annual license fees for access to an on-line database of accounting and auditing literature. The Audit Committee approves non-audit services provided by Ernst & Young LLP on an ad hoc basis, and has vested authority with Stelios B. Papadopoulos, the chairman of the Audit Committee, to approve non-audit services as needed.

**PART IV**

**ITEM 15. Exhibits and Financial Statement Schedules**

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

(3) Exhibits

The following exhibits are referenced or included in this report:

<b>Exhibit</b>	<b>Description</b>
31.3	Certifications of Chief Executive Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.
31.4	Certifications of Chief Financial Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.

**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.

NANOGEN, INC.

Date: April 29, 2008

By:

/s/ HOWARD C. BIRNDORF  
**Howard C. Birndorf**

**Chairman of the Board,**

**and Chief Executive Officer**

Pursuant to the requirements to 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.

Signature	Title	Date
/s/ HOWARD C. BIRNDORF <b>Howard C. Birndorf</b>	Chairman of the Board, and Chief Executive Officer (Principal Executive Officer)	April 29, 2008
/s/ NICHOLAS J. VENUTO <b>Nicholas J. Venuto</b>	Chief Financial Officer (Principal Financial and Accounting Officer)	April 29, 2008
/s/ DAVID SCHREIBER <b>David Schreiber</b>	Director	April 29, 2008
/s/ STELIOS B. PAPADOPOULOS <b>Stelios B. Papadopoulos</b>	Director	April 29, 2008
/s/ ROBERT E. WHALEN <b>Robert E. Whalen</b>	Director	April 29, 2008
/s/ HEINER DREISMANN <b>Heiner Dreismann</b>	Director	April 29, 2008