

NANOGEN INC  
Form 10-K/A  
March 24, 2006

---

**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, 2005**

**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**

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

NONE

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

Edgar Filing: NANOGEN INC - Form 10-K/A

Common Stock \$0.001 par value

Preferred Stock Purchase Rights

(Title of Class)

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, 2005 (the last day of the registrant's most recently completed second fiscal quarter), as reported on the Nasdaq National Market was approximately \$176,644,416. 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 61,993,933 as of March 17, 2006.

---

---

**INTRODUCTORY NOTE**

**This Form 10-K/A is being filed solely for the purpose of adding the information required by Part III of Form 10-K, and to add new certifications as required by Rule 12b-15 of the Exchange Act.**

**PART III**

**Item 10. Directors and Executive Officers of the Registrant**  
**Executive Officers**

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

<b>Name</b>	<b>Age</b>	<b>Position</b>
Howard C. Birndorf	56	Chairman and Chief Executive Officer
David Ludvigson	56	President and Chief Operating Officer
Robert Saltmarsh	56	Chief Financial Officer
Graham Lidgard, Ph.D	58	Senior Vice President, Research and Development
William L. Respass	67	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. and Kiyon, Inc. Mr. Ludvigson received a B.S. and an M.A.S. from the University of Illinois.

*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 Corning Medical/Ciba Corning 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.

*Robert Saltmarsh.* Mr. Saltmarsh has served as Nanogen s Chief Financial Officer since January 2005. Prior to that, he had served as Nanogen s Vice President of Corporate Development since September 2004. Prior to joining Nanogen, Mr. Saltmarsh consulted for a series of start-up companies from June 2002 to August 2004 and taught entrepreneurial finance at the University of California at Riverside from January to June 2004. Previously, he was Chief Financial Officer of Riffage.com from January 2000 to December 2000. Mr. Saltmarsh also served as Vice President of Finance and Treasurer at Silicon Graphics, Inc. from January 1996 to January 2000, and prior to that was Vice President of Finance and Treasurer at Apple Computer. He received a B.A. in Economics and an M.B.A. in Finance from the University of Michigan.

## Directors

Name	Age	Director	Compensation Committee	Audit Committee	Nominating, Governance, and Ethics Committee
Howard C. Birndorf	56	X			
Robert E. Whalen	62	X	X	X	X
William G. Gerber	58	X			X
Stelios B. Papadopoulos	65	X		X	X
David Schreiber	46	X	X	X	X

*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.

*Robert E. Whalen.* Mr. Whalen has been a director of Nanogen since April 2002. Mr. Whalen was a Regional Vice President of Quest Diagnostics from March 2003 to December 31, 2005 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.

*Dr. William Gerber.* Dr. Gerber is a Partner at Bay City Capital, a life sciences investment firm. He was most recently President and Chief Executive Officer of Epoch Biosciences until its merger with Nanogen in December 2004. Prior to joining Epoch in September 1999, Dr. Gerber served as President and Chief Executive Officer at diaDexus LLC a joint venture established by Incyte Pharmaceuticals and SmithKline Beecham to apply genomics to the discovery of novel diagnostic products. Dr. Gerber previously served as Vice President and Chief Operating Officer of Onyx Pharmaceuticals, as President of Chiron Diagnostics, and as Senior Vice President and General Manager of the PCR Division with Cetus Corporation. Dr. Gerber is a member of the Board of Directors of Sangamo Biosciences, Radiant Medical and Galileo Pharmaceuticals, and is Chairman of the Board of Directors of Pathway Diagnostics. He also served on and was President of the Board of Medical Quality Assurance, State of California. He received his M.D. and B.S. degrees from the University of California, San Francisco Medical Center after attending Dartmouth College.

*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 served as a director and as Chairman of the Audit Committee of US LABS, Inc. 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. Mr. Schreiber has served on the Board of Directors of Specialty Laboratories since June 2004. 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.

#### **Audit Committee**

The current members of the Audit Committee are Stelios B. Papadopoulos, David Schreiber and Robert E. Whalen. The Board of Directors believes that each of the members of the Audit Committee is independent in accordance with the listing standards of the Nasdaq Stock Market and under the rules established by the SEC for members of audit committees. Additionally, the Board of Directors has determined that Mr. Papadopoulos is an audit committee financial expert as defined in SEC rules. The Audit Committee held five (5) meetings during 2005. The Audit Committee's functions are to (i) oversee our accounting and financial reporting processes and audits of our financial statements, (ii) assist the Board of Directors in oversight and monitoring of the integrity of our financial statements, our compliance with legal and regulatory requirements, our independent auditor's qualifications, independence and performance, and our internal accounting and financial controls, (iii) prepare an annual report to be included in our annual proxy statement, (iv) provide the Board of Directors with results of its monitoring and recommendations derived therefrom, and (v) provide the Board of Directors with additional information and materials as it may deem necessary to make the Board of Directors aware of significant financial matters that require the attention of the Board of Directors. The Board of Directors has established a written charter for our Audit Committee, a copy of which is available on our website at [www.nanogen.com](http://www.nanogen.com) under our Corporate Governance Section.

#### **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 and the reasons therefore on our website at [www.nanogen.com](http://www.nanogen.com).

#### **Independence of the Board of Directors**

Our Board of Directors has determined that each of our current directors and each individual who served as a director during the 2005 year, except for Mr. Birndorf, our Chairman of the Board and Chief Executive Officer, and Mr. Gerber, is independent within the meaning of the applicable Nasdaq listing standards. Mr. Gerber is not independent due his consulting relationship with the Company described under the section Certain Transactions.

#### **Item 11. *Executive Compensation* Summary Compensation Information**

The following table provides certain summary information concerning the compensation earned by our Chief Executive Officer and each of the four other most highly compensated executive officers of Nanogen whose salary and bonus for the 2005 fiscal year was in excess of \$100,000, for services rendered in all capacities to Nanogen and its subsidiaries for the fiscal years ended December 31, 2003, 2004 and 2005. No other executive officers who would have otherwise been includable in such table on the basis of salary and bonus earned for the 2005 fiscal year has been excluded by reason of his or her termination of employment or change in executive status during that year. The listed individuals shall be hereinafter referred to as the Named Executive Officers.

Summary Compensation Table

Name and Principal Position	Year	Annual Compensation			Long-Term Compensation Awards		All Other Compensation (\$) <sup>(1)</sup>
		Salary(\$)	Bonus(\$)	Other Annual Compensation(\$)	Restricted Stock Awards(\$)	Securities Underlying Options(#)	
Howard C. Birndorf Chief Executive Officer	2005	\$ 485,000	\$ 38,800 <sup>(4)</sup>		\$ 440,000 <sup>(12)</sup>	150,000	\$ 2,367
	2004	\$ 485,000	\$ 115,000 <sup>(4)</sup>			300,000	\$ 7,328 <sup>(3)</sup>
	2003	\$ 420,000	\$ 67,000 <sup>(2)</sup>			325,000	\$ 46,171 <sup>(3)</sup>
David G. Ludvigson President,	2005	\$ 328,752	\$ 23,100 <sup>(4)</sup>		\$ 220,000 <sup>(13)</sup>	75,000	\$ 148,224 <sup>(15)</sup>
	2004	\$ 277,094	\$ 235,000 <sup>(6)(4)</sup>			450,000	\$ 1,360
	2003	\$ 167,000 <sup>(5)</sup>	\$ 40,000 <sup>(6)</sup>			265,000 <sup>(7)</sup>	\$ 8,074 <sup>(8)</sup>
Chief Operating Officer							
Rob Saltmarsh Chief Financial Officer	2005	\$ 239,167	36,600 <sup>(4)</sup>		\$ 110,000 <sup>(14)</sup>	187,500	\$ 1,999
	2004	\$ 55,366 <sup>(11)</sup>				25,000	\$ 142 <sup>(11)</sup>
William L. Respass Senior Vice President,	2005	\$ 308,626	\$ 47,123 <sup>(4)</sup>		\$ 110,000 <sup>(14)</sup>	37,500	\$ 6,349
	2004	\$ 210,385 <sup>(9)</sup>	\$ 44,000 <sup>(4)</sup>			250,000	\$ 2,723
	2003						
General Counsel and Secretary							
Graham Lidgard, Ph.D. Senior Vice President,	2005	\$ 275,000	\$ 34,719 <sup>(4)</sup>		\$ 110,000 <sup>(14)</sup>	37,500	\$ 2,376
	2004	\$ 223,965	\$ 54,000 <sup>(4)</sup>			100,000	\$ 2,070
	2003	\$ 204,000 <sup>(10)</sup>				225,000	\$ 1,750
Research and Development							

(1) Includes imputed income in connection with the excess group term life insurance:

	2005	2004	2003
Mr. Birndorf	\$ 2,367	\$ 2,328	\$ 2,171
Mr. Ludvigson	2,168	1,360	324
Mr. Respass	6,349	2,723	
Mr. Lidgard	2,376	2,070	1,750
Mr. Saltmarsh	\$ 1,999	\$ 142	\$

(2) Represents the accrued portion of a guaranteed annual bonus of \$100,000, which was eliminated in July 2003.

(3) Amount includes \$5,000 and \$44,000 for the years ended December 31, 2004 and 2003, respectively, of payments Mr. Birndorf received from a local charter aircraft company related to the our use of his aircraft for business related travel. We did not utilize the aircraft during 2005. For further information concerning the arrangement see Certain Transactions below.

## Edgar Filing: NANOGEN INC - Form 10-K/A

- (4) Represents the Named Executive Officer's bonus earned for the 2005 and 2004 fiscal years but paid in February 2006 and 2005, respectively.
- (5) Mr. Ludvigson joined us as an employee in May 2003, and his salary for 2003 reflects a partial year of service.
- (6) Includes a one-time sign-on bonus of \$150,000 paid in 2004 and a \$40,000 one-time sign-on bonus paid in 2003.
- (7) Includes options to purchase an aggregate of 73,332 shares that were granted to Mr. Ludvigson in his capacity as a non-employee Board member at the time of grant.
- (8) Represents payments in the aggregate of \$7,750 made for attendance at Board meetings during the period of Mr. Ludvigson's service as a non-employee Board member.
- (9) Mr. Respass joined us in April 2004, and his salary for 2004 reflects a partial year of service.



- (10) Mr. Lidgard joined us in January 2003, and his salary for 2003 reflects a partial year of service.
- (11) Mr. Saltmarsh joined us in September 2004, and his salary for 2004 reflects a partial year of service.
- (12) Represents Restricted Stock Units ( RSU s ) for 100,000 shares of Common Stock that had a fair market value of \$4.40 per share when those units were awarded on July 29, 2005. On December 31, 2005 Mr. Birndorf held 100,000 unvested RSU s. On December 31, 2005 the fair market value per share of our Common Stock was \$2.63. Accordingly, the value of the shares underlying Mr. Birndorf s unvested RSU s on December 31, 2005 was \$263,000. Such shares will vest and become issuable upon the completion of two years of service measured from the award date.
- (13) RSU s for 50,000 shares of Common Stock that had a fair market value of \$4.40 per share when those units were awarded on July 29, 2005. On December 31, 2005 Mr. Ludvigson held 50,000 unvested RSU s. On December 31, 2005 the fair market value per share of our Common Stock was \$2.63. Accordingly, the value of the shares underlying Mr. Ludvigson s unvested RSU s on December 31, 2005 was \$131,500. Such shares will vest and become issuable upon the completion of two years of service measured from the award date.
- (14) RSU s for 25,000 shares of Common Stock that had a fair market value of \$4.40 per share when those units were awarded on July 29, 2005. On December 31, 2005, Mr. Saltmarsh, Mr. Respass and Mr. Lidgard each held 25,000 unvested RSU s. On December 31, 2005 the fair market value per share of our Common Stock was \$2.63. Accordingly, the value of the shares underlying unvested RSU s held by Mr. Saltmarsh, Mr. Respass and Mr. Lidgard on December 31, 2005 was \$65,750. Such shares will vest and become issuable upon the completion of two years of service measured from the award date.
- (15) Amount includes \$146,056 of Mr. Ludvigson s moving expenses paid in 2005.

#### Stock Options

The following tables summarize option grants to and exercises by our Named Executive Officers during fiscal 2005, and the value of the options held by such persons at the end of fiscal 2005. None of the Named Executive Officers have been granted stock appreciation rights ( SARs ).

#### Option Grants in Fiscal 2005

	Individual Grants		Exercise or	Potential Realizable Value at Assumed Annual Rates of Stock Appreciation for Option Term <sup>(3)</sup>		
	Number of Securities Underlying	Percent of Total Options Granted to Employees in Fiscal Year		Base Price	Expiration	5%(\$)
	Options Granted (#)	2005 <sup>(1)</sup>	(\$/sh) <sup>(2)</sup>	Date	5%(\$)	10%(\$)
Howard C. Birndorf	150,000 <sup>(4)</sup>	9.4%	\$ 4.40	7/29/2015	\$ 415,070	\$ 1,051,870
David Ludvigson	75,000 <sup>(4)</sup>	4.7%	\$ 4.40	7/29/2015	\$ 207,535	\$ 525,935
Graham Lidgard, Ph.D	37,500 <sup>(4)</sup>	2.3%	\$ 4.40	7/29/2015	\$ 207,535	\$ 185,115
William L. Respass	37,500 <sup>(4)</sup>	2.3%	\$ 4.40	7/29/2015	\$ 103,768	\$ 262,968
Robert Saltmarsh	37,500 <sup>(4)</sup>	2.3%	\$ 4.40	7/29/2015	\$ 103,768	\$ 262,968
Robert Saltmarsh	150,000 <sup>(5)</sup>	9.4%	\$ 6.21	1/05/2015	\$ 585,815	\$ 1,484,571

(1) Based on 1,602,245 options granted during the fiscal year ended December 31, 2005.

Edgar Filing: NANOGEN INC - Form 10-K/A

- (2) The exercise price on the date of grant was equal to 100% of the fair market value on the date of grant.
- (3) The 5% and 10% assumed rates of appreciation are suggested by rules of the Securities and Exchange Commission and do not represent the our estimate or projection of the future Common Stock price. There can be no assurance that any of the values reflected in the table will be achieved.
- (4) Options vest over a two-year period of service with the Company measured from the grant date, with 25% vesting after 6 months of service and the balance vesting monthly thereafter.
- (5) Options vest monthly over a four-year period of service with the Company measured from the grant date.

---

**Aggregated Option Exercises in Fiscal 2005 and Value of Options**

At End of Fiscal 2005

Name	Shares Acquired  On Exercise	Value Realized-  (\$) <sup>(1)</sup>	Number of Securities	Value of Unexercised
			Underlying Unexercised	In-the-Money
			Options at	Options at
			End of Fiscal 2005 (#)	End of Fiscal 2005(\$) <sup>(2)</sup>
			Exercisable/Unexercisable	Exercisable/Unexercisable
Howard C. Birndorf			1,259,375/240,625	\$283,600/\$0
David Ludvigson			517,208/306,250	\$0/\$0
Graham Lidgard, Ph.D			261,980/100,520	\$81,119/\$30,131
William L. Respass			118,752/168,748	\$0/\$0
Robert Saltmarsh			59,375/153,125	\$0/\$0

- (1) The value realized upon exercise is (i) the fair market value of the Company's Common Stock on the date of exercise, less the option exercise price per share, multiplied by (ii) the number of shares underlying the options exercised.
- (2) The value of unexercised options is (i) the fair market value of the Company's Common Stock on December 31, 2005, \$2.61 per share (the closing selling price of the Company's Common Stock on that date on the Nasdaq National Market), less the option exercise price of in-the-money options, multiplied by (ii) the number of shares underlying such options.

**Employment, Severance and Change in Control Agreements**
*Howard Birndorf*

Effective as of June 3, 2001, we entered into an employment agreement with Howard C. Birndorf relating to his employment as our Executive Chairman. The term of the agreement is three (3) years, subject to automatic renewal for successive additional three (3) year terms. In the event the agreement is not renewed, Mr. Birndorf will become entitled to salary continuation payments for a period of 18 months. The agreement originally provided Mr. Birndorf with (i) an annual base salary of \$365,000, subject to adjustment annually, (ii) an annual guaranteed bonus of \$100,000 and (iii) an additional bonus potential of up to 60% of his base salary contingent upon the Company's achievement of performance goals determined annually by the Board (the Achievement Bonus). In 2003, Mr. Birndorf became the Chief Executive Officer of the Company and a member of the Board of Directors. In connection therewith, Mr. Birndorf agreed to an amendment to his employment agreement pursuant to which his base salary was increased to \$485,000 per year and his \$100,000 guaranteed annual bonus was eliminated. In the event of a change in control or other significant event defined in his employment agreement, Mr. Birndorf will become entitled to a transaction bonus in the amount equal to 180% of his annual base salary (the Transaction Bonus), and accelerated vesting of all of his outstanding options, with such vesting to occur automatically upon a change of control or with the approval of the Board upon the occurrence of any other significant event. Any Transaction Bonus paid to Mr. Birndorf in connection with such a change in control or other significant event will be in lieu of any Achievement Bonus to which he might otherwise become entitled for the year in which such Transaction Bonus is paid. If there is a change in control and Mr. Birndorf's employment is terminated without cause or there is a constructive termination of his employment, including a material reduction in his duties and responsibilities, he will become entitled to salary continuation payments for a period of 18 months. In the event Mr. Birndorf's employment with us is terminated without cause, or in the event of a constructive termination of his employment, in the absence of a change in control, he will become entitled to six months of salary continuation. During any period in which salary continuation payments are being made to Mr. Birndorf, he has agreed not to engage in any business activity that is competitive with us or hire or solicit any employee or exclusive consultant related to our Company.

*Graham Lidgard*

Effective as of January 24, 2003, we entered into an employment agreement with Graham Lidgard. The term of the agreement is three (3) years, subject to automatic renewal for successive additional three (3) year terms. In the event the agreement is not renewed, Mr. Lidgard will become entitled to salary continuation payments for a period of 6 months. Pursuant to this agreement Mr. Lidgard will receive an annual base salary of \$210,000, subject to adjustment annually. Mr. Lidgard will also be entitled to a bonus of up to 50% of his base salary contingent upon our achievement of performance goals determined annually by the Board (the Achievement Bonus). In the event of a change in control or other significant event defined in his employment agreement, Mr. Lidgard will receive a transaction bonus in an amount equal to 50% of his annual base salary (the Transaction Bonus); and all his outstanding options will vest in full, either automatically upon a change of control or with the approval of the Board upon the occurrence of any other significant event. Any Transaction Bonus paid to Mr. Lidgard in connection with such a change in control or other significant event will be in lieu of any Achievement Bonus to which he might otherwise become entitled for the year in which such Transaction Bonus is paid. Mr. Lidgard is also entitled to six months of salary continuation in the event his employment with the Company is terminated without cause or in the event of a constructive termination, including a material reduction in his duties and responsibilities. In the event of Mr. Lidgard's disability, he will be entitled to salary continuation payments until the earlier of (i) 90 days following his termination date due to his disability or (ii) the date he becomes entitled to receive disability benefits payments under the disability insurance policy. During any period in which salary continuation payments are being made he has agreed not to engage in any business activity that is competitive with us or hire or solicit any employee or exclusive consultant of our Company.

*David Ludvigson*

May 1, 2003, we entered into an employment agreement with David Ludvigson whereby he became Executive Vice President, Chief Financial Officer and Treasurer. The agreement provided for an annual base salary of \$250,000, a one time sign-on bonus of \$40,000 and additional incentive compensation of up to 50% of Mr. Ludvigson's base salary, half of which was based solely on the discretion of the Board and the other half of which was contingent upon the Company's achievement of performance goals determined annually by the Board. In June 2004, Mr. Ludvigson became our President and Chief Operating Officer and we entered into a new employment agreement with Mr. Ludvigson effective June 1, 2004. The agreement provides for an annual base salary of \$300,000 and an annual bonus in the amount of up to 55% of his base salary composed as follows: up to 30% of his annual base salary may be awarded based on achievement of annual milestones subject to the approval of the Board of Directors and 25% of his annual salary may be awarded solely at the discretion of the Board of Directors. Mr. Ludvigson also received a one time bonus of \$150,000 and an option to purchase 300,000 shares of Nanogen common stock at fair market value in connection with the June 2004 employment agreement, which options vest in equal monthly installments over a four year period. In the event of a change in control or other significant event defined in his employment agreement, Mr. Ludvigson will become entitled to a transaction bonus in the amount equal to one times his annual base salary (the Transaction Bonus), and accelerated vesting of all of his outstanding options, with such vesting to occur automatically upon a change of control, or with the approval of the Board upon the occurrence of any other significant event. Any Transaction Bonus paid to Mr. Ludvigson in connection with such a change in control or other significant event will be in lieu of any annual bonus to which he might otherwise become entitled for the year in which such Transaction Bonus is paid. In the event Mr. Ludvigson's employment with us is terminated for any reason other than for cause, or in the event of a constructive termination of his employment, in the absence of a change in control, he will become entitled to six months of salary continuation and health insurance benefits.

*William Respass*

On January 28, 2004, we entered into an employment agreement with William Respass relating to his employment as our Senior Vice President, General Counsel and Secretary. The agreement provided for an annual base salary of \$240,000 and a guaranteed annual bonus of \$60,000. On May 3, 2004, the agreement was

retroactively awarded to provide a base salary of \$300,000, and eliminate the guaranteed bonus provision. Mr. Respass is eligible for an annual bonus in the amount of up to 50% of his base salary composed as follows: up to 25% of his annual base salary may be awarded based on annual milestones subject to the approval of the Board of Directors and up to 25% of his annual salary may be awarded solely at the discretion of the Board of Directors. In connection with his employment agreement, Mr. Respass also received an option to purchase 200,000 shares of Nanogen common stock at fair market value. The options vest in equal monthly installments over a four year period except that 25% will not vest until the first anniversary of Mr. Respass' employment. In the event of a change in control or other significant event defined in his employment agreement, Mr. Respass may receive accelerated vesting of all of his outstanding options if determined by the Compensation Committee. In the event Mr. Respass' employment with us is terminated for any reason other than for cause, or in the event of a constructive termination of his employment, in the absence of a change in control, he will become entitled to six months of salary continuation and health insurance benefits.

*Robert Saltmarsh*

On December 20, 2004, we entered into an employment agreement regarding the terms of Robert Saltmarsh's employment. The agreement provides that Mr. Saltmarsh will receive an initial annual base salary of \$240,000 and an annual achievement bonus of up to 50% of his base salary (the Achievement Bonus) based upon the achievement by the Company of its corporate goals as established and determined by the Board of Directors annually and for other achievements during the year as approved by the Compensation Committee. In addition, Mr. Saltmarsh is entitled to receive a transaction bonus equal to 50% of his base salary upon the occurrence of certain corporate transactions defined in the Employment Agreement (the Transaction Bonus). In the event Mr. Saltmarsh receives a Transaction Bonus, no Achievement Bonus will be paid to Mr. Saltmarsh in the year in which such Transaction Bonus is paid. In connection with his appointment as Chief Financial Officer, on January 5, 2005, the Compensation Committee of the Board of Directors granted Mr. Saltmarsh options to purchase 150,000 shares of our common stock. The options vest in equal monthly installments over a four year period. In the event of a change in control or certain other corporate events, the agreement provides for accelerated vesting of all of his outstanding options, with such vesting to occur automatically upon a change of control, or with the approval of the Board upon the occurrence of any other significant event. If Mr. Saltmarsh's employment is terminated by us without cause or in the event of a constructive termination, we will continue to pay Mr. Saltmarsh's base salary for six months from the date of such termination as severance compensation. The agreement has an initial term of three years, subject to automatic renewal for successive additional three year terms. In the event the agreement is not renewed, Mr. Saltmarsh will become entitled to salary continuation payments for a period of six months. During any period in which salary continuation payments are being made to Mr. Saltmarsh, he has agreed not to engage in any business activity that is competitive with us or hire or solicit any of our employees or exclusive consultants.

In the event any payment or benefit provided to any individual under the Company's 1997 Stock Incentive Plan 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 the Company 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.

**Compensation of Directors**

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 9, 2005 Messrs. Whalen, Gerber, Papadopoulos, Schreiber and Jellinek, now deceased, each received 6,812 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 Chairmen 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. 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 2005, 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 the 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 June 9, 2005 William Gerber and Frank Jellinek each received an option to purchase 25,000 shares of our Common Stock at an exercise price per share of \$3.67, 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.

#### Compensation Committee Interlocks and Insider Participation

The following individuals served as members of our Compensation Committee during 2005: David Schreiber, Val Buonaiuto and Frank Jellinek, each of whom were independent directors during 2005. Mr. Buonaiuto resigned from the Board of Directors on May 25, 2005. During 2005, none of our executive officers 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, 2005. The table excludes information related to the outstanding options granted under our equity compensation plans where no additional options may be granted. Footnote 6 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.	B.	C.
	Number of Shares to be Issued Upon Exercise of Outstanding Options	Weighted Average Exercise Price of Outstanding Options	Number of Shares Remaining Available for Future Issuance (Excluding Securities Reflected in Column A)
Equity compensation plans approved by stockholders <sup>(1)</sup>	6,309,616 <sup>(2)</sup>	\$ 4.82	498,183 <sup>(3)</sup>
Equity compensation plans not approved by stockholders <sup>(4)</sup>	459,688	\$ 7.20	103,937 <sup>(5)</sup>
Total	6,769,304	\$ 4.98	602,120

- (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) Excludes purchase rights accruing under the Employee Stock Purchase Plan which has a shareholder approved reserve of 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) Consists of shares available for issuance under the Bonus Plan and the 1997 Stock Incentive Plan. As of December 31, 2005, 178,390 shares were available for issuance under the Bonus Plan and 319,793 shares were available for issuance under the 1997 Stock Incentive Plan, respectively. The 319,793 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.
- (4) 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 103,937 shares available for issuance under Epoch Biosciences, Inc. 2003 Stock Incentive Plan, as of December 31, 2005, 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.
- (5) 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, 2006 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.
- (6) 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, 2005 a total of 862,445 shares of Common Stock were subject to those assumed options, and the weighted average exercise price of those assumed options was \$7.87 per share.

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

As of December 31, 2005, approximately 103,937 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. As of December 31, 2005 options to purchase 459,688 shares of Common Stock were outstanding under the assumed Epoch Biosciences, Inc. 2003 Stock Incentive Plan, 563,625 shares of Common Stock had been authorized under such plan, and 103,937 shares of Common Stock remained available for future issuance. On January 1, 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.

**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 March 17, 2006 (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.

Name and Address of Beneficial Owner	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	9.1%
Fort Mason Capital LLC <sup>(3)</sup> 456 Montgomery Street, 22 <sup>nd</sup> Floor San Francisco, CA 94104	5,312,660	8.6%
Howard C. Birndorf <sup>(4)</sup> c/o Nanogen, Inc. 10398 Pacific Center Court San Diego, CA 92121	2,034,302	3.3%
David G. Ludvigson <sup>(5)</sup>	703,107	1.1%
Robert Saltmarsh <sup>(6)</sup>	117,672	*
Graham Lidgard, Ph.D. <sup>(7)</sup>	336,067	*
William L. Respass <sup>(8)</sup>	202,149	*
Robert Whalen <sup>(9)</sup>	42,078	*
Stelios Papadopoulos <sup>(10)</sup>	72,078	*
David Schreiber <sup>(11)</sup>	31,307	*
William G. Gerber <sup>(12)</sup>	233,452	*
All directors and executive officers as a group (9 persons) <sup>(13)</sup>	3,772,212	6.1%



\* 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 March 17, 2005. Shares of common stock issuable upon exercise of options currently exercisable, or exercisable within 60 days after March 17, 2006 and shares of common stock issuable within 60 days after March 17, 2006 pursuant to outstanding restricted stock units, are deemed outstanding for purpose of computing the percentage ownership of the person holding such options, but are not deemed outstanding for the computing the percentage ownership of any other person.
- (2) Pursuant to a Schedule 13G filed on March 15, 2006 with the SEC by Fisher Scientific International, Inc. claimed it share voting power and share dispositive power over 5,660,377 shares of common stock.
- (3) Pursuant to a Schedule 13G/A filed on January 13, 2006 with the SEC by Fort Mason Capital, LLC claimed it had shared voting power and shared dispositive power over 5,312,660 shares of common stock. Fort Mason Master, LP, a Cayman Island limited partnership (Master), and Fort Mason Partners, LP, a Delaware limited partnership (Partners and together with Master, the Funds), held in aggregate 4,547,354 shares of the common stock and warrants that entitle the Fund to purchase up to an aggregate of 765,306 additional shares at an exercise price of \$4.00 per share. Fort Mason Capital, LLC, a Delaware limited liability company, service as the investment manager of the Funds and possesses sole power to vote and direct the disposition of all securities.
- (4) Includes 1,368,750 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (5) Includes 601,583 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (6) Includes 89,062 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (7) Includes 305,729 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (8) Includes 157,815 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (9) Includes 25,000 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (10) Includes 55,000 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (11) Includes 18,229 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (12) Includes 221,968 shares issuable upon the exercise of options within 60 days of March 17, 2006.
- (13) Includes five Board members, one of whom is an executive officer, and four other current executive officers.

**Item 13. Certain Relationships and Related Transactions**

In June 2005, we signed a letter of agreement with FasTraQ, Inc. (FasTraQ) for the development of certain future product. In October and December 2005 we amended this letter of agreement. In February 2006, we converted this letter of agreement into an executed contract. Our Chief Executive Officer and Chairman of the Board, Mr. Birndorf, is a director and an investor in FasTraQ. Mr. Birndorf abstained from the discussions and votes regarding FasTraQ at the meetings of our Board of Directors. As a result of the agreements and related amendments we

## Edgar Filing: NANOGEN INC - Form 10-K/A

made an initial non-refundable payment of \$500,000 to FasTraQ to begin the initial development of this product as well as a \$25,000 payment to purchase certain product from them. As of December 31, 2005, the full \$525,000 had been expensed.

We are also obligated to supply materials at no cost to be used in the development of this technology and pay FasTraQ up to \$500,000 based on meeting certain research milestones.

Mr. Birndorf owns an aircraft which is leased by a local charter aircraft company. We did not utilize the aircraft during 2005; however, for the year ended December 31, 2004, the Company paid approximately \$13,000 to the local charter aircraft company for the Company's use of Mr. Birndorf's aircraft for business related travel. Mr. Birndorf receives approximately \$1,500 per hour of usage when his aircraft is leased to outside parties, including the Company. Mr. Birndorf received \$5,000 for the year ended December 31, 2004 as a result of the Company's use of Mr. Birndorf's aircraft. The Board believes that the terms of the charter arrangements are no less favorable to the Company than those that could be obtained from unrelated third parties, based on review of lease fees published by other charter companies.

William Gerber was the President, Chief Executive Officer and a Director of Epoch Biosciences, Inc., a company acquired by us in December 2004. On December 15, 2004 we and Mr. Gerber entered into a consulting agreement pursuant to which Mr. Gerber provides consulting services to us from time to time, as requested by Howard Birndorf or David Ludvigson, regarding the integration of the business of Epoch and other strategic issues facing the Company. The agreement will terminate upon the Gerber's election to the Board. Mr. Gerber has received no cash compensation pursuant to the consulting agreement; however, his vested options to purchase 221,968 shares of our Common Stock (which were originally granted to him under Epoch's stock option plans and subsequently converted into options to purchase shares of Nanogen Common Stock pursuant to the acquisition) will remain outstanding during the duration of Mr. Gerber's service relationship with us, either as a non-employee Board member or pursuant to the consulting agreement. In accordance with the terms of the applicable option agreements, Mr. Gerber's options will terminate and cease to remain outstanding upon the twelve month anniversary of the termination of Mr. Gerber's service relationship with us. We believe that the value attributable to the extended period that the vested option shares remain outstanding is in excess of \$60,000.

We believe that the foregoing transactions were in its best interests. It is our current policy that all transactions by us with our officers, directors, and 5% stockholders or their affiliates will be entered into only if such transactions are approved by a majority of the disinterested directors, and are on terms no less favorable to us than could be obtained from unaffiliated parties.

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

The following table sets forth the aggregate fees billed to us for our annual audits for the fiscal years ended December 31, 2005 and 2004, and all other fees billed during 2005 and 2004 related to our principal accounting firm, Ernst & Young LLP:

	For the Years Ended December 31,	
	2005	2004
	(in thousands)	
Audit Fees	\$ 534	\$ 583
Audit-Related Fees	103	12
Tax Fees		
All Other Fees	2	
<b>Total</b>	<b>\$ 639</b>	<b>\$ 595</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 our consolidated financial statements, reviews of interim consolidated financial statements. In 2004 and 2005, audit fees also include fees incurred for the audits of management's assessment of the effectiveness of internal controls over financial reporting as required under the Sarbanes-Oxley regulations. No material weaknesses were determined in our internal controls. The fees listed under "Audit-Related Fees" above were incurred for service related to accounting consultations and due diligence in

connection with a proposed acquisition. 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.

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

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Description of Document</b>
2.1(20)	Plan of Arrangement between Nanogen, Inc. and SynX Pharma, Inc., dated February 9, 2004.
2.2(19)	Agreement and Plan of Merger and Reorganization dated September 7, 2004, by and among Nanogen, Inc., Empire Acquisition Corp. and Epoch Biosciences.
2.3(29)	Asset Purchase Agreement among Registrant, SynX Pharma, Inc. and Spectral Diagnostics, Inc., dated December 19, 2005.
3.1(3)	Restated Certificate of Incorporation. (3.(i)1)
3.2(17)	Certificate of Amendment to Restated Certificate of Incorporation.
3.3(3)	Certificate of Designations, as filed with the Delaware Secretary of State on November 23, 1998. (3.(ii)2)
3.4(11)	Amended and Restated Bylaws of Registrant. (3.(ii)1).
4.1(1)	Form of Common Stock Certificate. (4.1)
4.2(2)	Rights Agreement between Registrant and BankBoston, N.A., dated November 17, 1998.
4.3(8)	Amendment No. 1 to Rights Agreement between Registrant and FleetBoston, N.A., dated December 11, 2000.
10.1(21)(A)	Amended and Restated 1997 Stock Incentive Plan of Nanogen, Inc. (the 1997 Plan ).
10.2(6)(A)	Form of Incentive Stock Option Agreement under the 1997 Plan, as amended. (10.2)
10.3(6)(A)	Form of Nonqualified Stock Option Agreement under the 1997 Plan, as amended. (10.3)
10.4(21)(A)	Amended and Restated Nanogen, Inc. Employee Stock Purchase Plan. (99.2)
10.5(13)(A)	Nanogen, Inc. 2002 Stock Bonus Plan.
10.6(1)(A)	Form of Indemnification Agreement between Registrant and its directors and executive officers. (10.7)
10.7(7)	Warrant to Purchase Common Stock between Registrant, Aventis Research and Technologies Verwaltungs GmbH, dated September 22, 2000. (10.9)
10.8(12)	Warrant to Purchase Common Stock between Registrant and Genetic Technologies Limited, dated June 3, 2002. (10.9)
10.9(16)	Form of Securities Purchase Agreement between Registrant and investors described therein, dated September 17, 2003.
10.10(18)	Warrant to Purchase Common Stock between Registrant and Aventis Pharma Deutschland GmbH, dated June 6, 2003. (10.10)

Edgar Filing: NANOGEN INC - Form 10-K/A

<b>Exhibit Number</b>	<b>Description of Document</b>
10.11(5)(+)	Reader, Loader and Cassette Low Cost Engineering and Manufacturing Agreement between Registrant and Hitachi, Ltd., dated as of December 15, 1999.
10.12(7)(+)	First Amendment to Reader, Loader and Cassette Low Cost Engineering and Manufacturing Agreement between Registrant and Hitachi, Ltd., dated July 26, 2000. (10.7)
10.13(7)(+)	Collaboration Agreement among Registrant and Hitachi, Ltd., Nissei Sangyo Co. Ltd. and Hitachi Instruments Service Co. Ltd. (collectively, the Hitachi Parties ), dated July 26, 2000. (10.6)
10.14(7)	Common Stock Purchase Agreement between Registrant and the Hitachi Parties, dated July 26, 2000. (10.8)
10.15(1)	Amended and Restated Investors Rights Agreement between Registrant and certain security holders set forth therein, dated May 5, 1997, as amended. (10.18)
10.16(1)	Master Lease Agreement between Registrant and Mellon US Leasing, dated September 11, 1997. (10.19)
10.17(1)	Master Lease Agreement between Registrant and LMP Properties Ltd., dated June 29, 1994, as amended on March 14, 2001. (10.20)
10.18(1)	Lease Agreement between Registrant and Lease Management Services, Inc., dated April 26, 1994, as amended on December 13, 1994 and June 13, 1996. (10.21)
10.19(1)(A)	Form of Promissory Note between Registrant and certain of its executive officers, dated August 22, 1996. (10.23)
10.20(1)(A)	Form of Promissory Note between Registrant and certain of its executive officers, dated June 30, 1995. (10.24)
10.21(1)(A)	Form of Performance Stock Option Agreement. (10.26)
10.22(11)(A)	Amended and Restated Employment Agreement between Registrant and Howard C. Birndorf, dated June 3, 2001. (10.2)
10.23(15)(A)	Separation Agreement between Registrant and Kieran T. Gallahue, dated January 2, 2003.
10.24(15)(A)	Separation Agreement between Registrant and Dr. Vance R. White, dated December 11, 2002.
10.25(18)(A)	Separation Agreement between Registrant and Ira Marks, dated August 15, 2003. (10.25)
10.26(15)(A)	Employment Agreement between Registrant and Bruce A. Huebner, dated December 1, 2002.
10.27(15)(A)	Employment Agreement between Registrant and William Franzblau, dated January 24, 2003.
10.28(15)(A)	Employment Agreement between Registrant and David Macdonald, dated January 24, 2003.
10.29(15)(A)	Employment Agreement between Registrant and Graham Lidgard, dated January 24, 2003.
10.30(18)(A)	Separation Agreement between Registrant and Gerard A. Wills, dated May 21, 2003. (10.30)
10.31(22)(A)	Employment Agreement between Registrant and David Ludvigson, dated April 30, 2004. (10.1)
10.32(23)(A)	Employment Agreement between Registrant and Dr. William L. Respass, dated January 28, 2004. (10.42)
10.33(15)(A)	Indemnification Agreement between Registrant and Bruce A. Huebner, dated effective as of December 1, 2002.
10.34(15)(A)	Indemnification Agreement between Registrant and Graham Lidgard, dated effective as of January 24, 2003.

## Edgar Filing: NANOGEN INC - Form 10-K/A

Exhibit Number	Description of Document
10.35(9)(+)	Cooperation and Shareholders Agreement among Aventis Research & Technologies GmbH & Co. KG ( Aventis R&T ), Registrant and Nanogen Recognomics GmbH ( Nanogen Recognomics ), dated June 29, 2001. (10.3).
10.36(9)(+)	Contribution Agreement among Aventis R&T, Registrant and Nanogen Recognomics, dated June 27, 2001. (10.4).
10.37(11)(+)	Settlement Agreement among Motorola, Inc., Genometrix, Inc., the Massachusetts Institute of Technology and Registrant, dated July 20, 2001. (10.6)
10.38(14)	Settlement Agreement among CombiMatrix Corporation, Dr. Donald Montgomery, Acacia Research Corporation and Registrant, dated September 30, 2002.
10.39(4)	Master Loan and Security Agreement between Registrant and Transamerica Business Credit Corporation, dated June 14, 1999.
10.40(22)(+)	Cross License Agreement on NT-pro BNP between SynX Pharma, Inc. and Roche Diagnostics GmbH., dated July 17, 2003. (10.2)
10.41(24)	SynX Pharma, Inc. Stock Option Plan. (99.1)
10.42(24)	Form of Stock Option Agreement (SynX Pharma, Inc. Stock Option Plan). (99.2)
10.43(25)	Epoch Biosciences 2003 Stock Incentive Plan. (99.1)
10.44(25)	Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1991. (99.2)
10.45(25)	Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1993. (99.3)
10.46(26)	Form of Stock Option Agreement Epoch Biosciences 2003 Stock Incentive Plan. (10.46)
10.47(25)	Form of Stock Option Agreement Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1991. (99.5)
10.48(25)	Form of Stock Option Agreement Epoch Pharmaceuticals, Inc. Incentive Stock Option, Nonqualified Stock Option and Restricted Stock Purchase Plan 1993. (99.5)
10.49(26)(+)	Second Amended and Restated Collaboration, License and Supply Agreement by and between Epoch and Applera Corporation, formerly PE Corporation, through its Applied Biosystems Group, dated August 17, 2000. (10.49)
10.50(26)(+)	First Side Agreement dated October 31, 2001 by and between Epoch and Applera Corporation (formerly PE Corporation). (10.50)
10.51(26)(+)	Amendment No. 1 to Second Amended and Restated Collaboration, License and Supply Agreement between Epoch and Applera Corporation, formerly PE Corporation, through its Applied Biosystems Group, dated July 26, 2002. (10.51)
10.52(27)	Employment Agreement between Registrant and Robert Saltmarsh, dated December 20, 2004.
10.53(28)	Epoch Biosciences, Inc. 2003 Stock Incentive Plan, as amended and restated as of July 29, 2005.
10.54(30)	Placement Agency Agreement among Registrant, Seven Hills Partners LLC and Stonegate Securities, Inc., dated September 27, 2005. (10.1)
10.55(30)	Form of Warrant. (4.1)
10.56(31)(++)	Amendment No. 2 to Second Amended and Restated Collaboration, License and Supply Agreement between Epoch and Applera Corporation, formerly PE Corporation, through its Applied Biosystems Group, dated effective as of December 31, 2005. (10.56)

Exhibit Number	Description of Document
10.57(31)(++)	Development Agreement between Registrant and Princeton BioMeditech Corporation, dated January 13, 2006. (10.57)
10.58(31)(++)	Manufacturing and Distribution Agreement between Registrant and Princeton BioMeditech Corporation, dated October 27, 2005. (10.58)
10.59(31)(++)(A)	Nanogen, Inc. 2006 Executive Officer Incentive Compensation Plan. (10.59)
14.1(15)	Nanogen, Inc. Ethics Policy. (99.2)
21.1(31)	List of Subsidiaries. (21.1)
23.1(31)	Consent of Independent Registered Public Accounting Firm.(23.1)
31.1(31)	Certifications of Chief Executive Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended. (31.1)
31.2(31)	Certifications of Chief Financial Officer Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended. (31.2)
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.
32.1(31)	Certifications of Chief Executive Officer Required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended. (32.1)
32.2(31)	Certifications of Chief Financial Officer Required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended. (32.2)

- (1) Incorporated by reference to Registrant's Registration Statement on Form S-1 (File No. 333-42791). Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (2) Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form 8-A, filed on November 24, 1998.
- (3) Incorporated by reference to Registrant's Annual Report on Form 10-K for the year ended December 31, 1998. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (4) Incorporated by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1999.
- (5) Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2000.
- (6) Incorporated by reference to the Registrant's Form S-8 filed on June 15, 2000. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (7) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.



Edgar Filing: NANOGEN INC - Form 10-K/A

(8) Incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on December 12, 2000.

## Edgar Filing: NANOGEN INC - Form 10-K/A

---

- (9) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (10) Incorporated by reference to Exhibit 10.1 to the Registrant's Form S-8 filed on June 20, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (11) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2001. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (12) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (13) Incorporated by reference to Exhibit 10.1 to the Registrant's Form S-8 filed on August 16, 2002.
- (14) Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 31, 2002.
- (15) Incorporated by reference to Registrant's Annual Report on Form 10-K for the year ended December 31, 2002. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (16) Incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on September 22, 2003.
- (17) Incorporated by reference to Exhibit 3.1 to the Registrant's Form 8-K filed on December 21, 2004.
- (18) Incorporated by reference to the Registrant's Form 10-K for the year ended December 31, 2003. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (19) Incorporated by reference to Exhibit 2.1 of the Registrant's Form 8-K filed on September 8, 2004.
- (20) Incorporated by reference to Exhibit 2.1 of the Registrant's Form 8-K filed on May 6, 2004.
- (21) Incorporated by reference to the Registrant's Form S-8 (File No. 333-116605) filed June 18, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (22) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (23) Incorporated by reference to Exhibit 10.42 of the Registrant's Form S-4 (File No. 333-119558) filed on October 6, 2004.
- (24)

## Edgar Filing: NANOGEN INC - Form 10-K/A

Incorporated by reference to the Registrant's Registration Statement on Form S-8 (File No. 333-115629), filed on May 19, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.

- (25) Incorporated by reference to the Registrant's Registration Statement on Form S-8 (File No. 333-121508) filed on December 21, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (26) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2004. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
- (27) Incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on January 11, 2005.

- (28) Incorporated by reference to Exhibit 99.1 to the Registrant's Form S-8 (File No. 333-127916) filed on August 29, 2005.
  
- (29) Incorporated by reference to Exhibit 2.1 to the Registrant's Form 8-K filed on December 23, 2005.
  
- (30) Incorporated by reference to the Registrant's Form 8-K filed on September 28, 2005. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
  
- (31) Incorporated by reference to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005. Parenthetical references following the description of each document relate to the exhibit number under which such exhibit was initially filed.
  
- (A) Indicates management compensatory plan or arrangement.
  
- (+) Confidential treatment has been granted for certain information contained in this document pursuant to an order of the Securities and Exchange Commission. Such information has been omitted and filed separately with the Securities and Exchange Commission.
  
- (++) Confidential treatment has been requested for certain information contained in this document. Such information has been omitted and filed separately with the Securities and Exchange Commission.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 24, 2006

NANOGEN, INC.  
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)	March 24, 2006
/s/ ROBERT SALTMARSH  <b>Robert Saltmarsh</b>	Chief Financial Officer  (Principal Financial and Accounting Officer)	March 24, 2006
/s/ DAVID SCHREIBER  <b>David Schreiber</b>	Director	March 24, 2006
/s/ STELIOS B. PAPADOPOULOS  <b>Stelios B. Papadopoulos</b>	Director	March 24, 2006
/s/ ROBERT E. WHALEN  <b>Robert E. Whalen</b>	Director	March 24, 2006
/s/ WILLIAM G. GERBER  <b>William G. Gerber</b>	Director	March 24, 2006