NANOGEN INC
Form S-3/A
June 30, 2006
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As filed with the United States Securities and Exchange Commission on June 30, 2006

Registration No. 333-134131

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

AMENDMENT NO. 1

To

FORM S-3

REGISTRATION STATEMENT

Under

THE SECURITIES ACT OF 1933

NANOGEN, INC.

(Exact Name of Registrant as Specified in Its charter)

Delaware	**33-0489621**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

10398 Pacific Center Court

San Diego, CA 92121

(858) 410-4600

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)

Robert W. Saltmarsh

Chief Financial Officer

Nanogen, Inc.

10398 Pacific Center Court

San Diego, CA 92121

(858) 410-4600

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Scott D. Karchmer, Esquire

Morgan, Lewis & Bockius LLP

One Market, Spear Street Tower

San Francisco, CA 94105

(415) 442-1000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ¨

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨ _____

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨ _____

If this form is a registration pursuant to General Instruction I.D. or a post effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, please check the following box. ¨

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, please check the following box. ¨

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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PROSPECTUS

NANOGEN, INC.

2,886,935 Shares of Common Stock

The stockholder of Nanogen, Inc. identified in this prospectus under Selling Stockholder may offer from time to time up to 2,886,935 shares of our common stock, all of which shares are issuable to the selling stockholder upon conversion of a convertible promissory note. We issued the convertible promissory note to the selling stockholder in connection with our acquisition, effective May 1, 2006, from Amplimedical S.p.A. of its business division for developing, manufacturing, test, distribution and selling diagnostic products and diagnostic-related products.

We will not receive any proceeds from the sale of the shares by the selling stockholder covered by this prospectus. We will bear all expenses relating to registration of the shares.

Our common stock trades on the Nasdaq National Market under the symbol NGEN . On June 29, 2006, the last reported sale price of our common stock on the Nasdaq National Market was $1.68.

An investment in the securities offered under this prospectus involves a high degree of risk. You should carefully consider the risk factors described on pages 2-17 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 30, 2006.

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FORWARD-LOOKING STATEMENTS

This prospectus, and the documents incorporated herein by reference include forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements other than statements of historical fact are forward-looking statements for purposes of these provisions, including any projections of earnings, revenues or other financial items, any statements of the plans and objectives of management for future operations, any statements concerning proposed new products or services, any statements regarding future economic conditions or performance, any statements relating to future regulatory action, and any statement of assumptions underlying any of the foregoing. In some cases, forward-looking statements can be identified by the use of terminology such as may , should , could , would , will , believes , intends , expects , plans , anticipates , estimates , potential , or continue or the negative thereof or other comparable terminolo we believe that the expectations reflected in the forward-looking statements contained in this prospectus and in the incorporated documents are reasonable, we cannot assure you that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including but not limited to those set forth herein under the heading Risk Factors and those discussed in documents we incorporate by reference into this prospectus and for the reasons described elsewhere in this prospectus.

We will not update these forward-looking statements, whether as a result of new information, future events or otherwise. You should, however, review additional disclosures we make in our quarterly reports on Form 10-Q, current reports on Form 8-K and annual reports on Form 10-K filed with the SEC.

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THE COMPANY

Nanogen was founded with a vision to improve the quality of healthcare by introducing advanced human diagnostic products that will provide higher quality of information in a shorter period of time to our customers in the research, clinical laboratory or point-of-care markets. We intend to turn this vision into reality by continuing to develop new diagnostic products and by acquiring other companies and complementary products that will expand and accelerate our entry into rapidly growing diagnostic markets. We began a targeted acquisition strategy during 2004 that is expected to result in a broad product line of advanced diagnostic products. The combination of internally developed products plus acquired products addressing large markets should provide the stimulus for revenue acceleration in 2006 and beyond.

We were incorporated under the laws of the State of Delaware and our stock is listed on the Nasdaq National Market under the symbol NGEN . Our corporate offices are located at 10398 Pacific Center Court, San Diego, California 92121. Our main telephone number is 858-410-4600.

For further information regarding us and our financial information, you should refer to our recent filings with the SEC. See Where You Can Find More Information and Incorporation of Certain Documents by Reference.

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RISK FACTORS

An investment in the shares of our common stock involves a high degree of risk. You should carefully consider the information set forth below before investing in our common stock. The trading price of our common stock could decline due to any of these risks, and you may lose some or all of your investment.

The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties, including those not presently known to us or that we currently deem immaterial, may also result in a failure to meet projected operating results, decreased revenues, increased expenses or other adverse impacts that could result in a decline in the price of our common stock. You should also refer to the other information set forth in this prospectus, in our most recent annual report on Form 10-K, including our consolidated financial statements and the related notes, our quarterly reports on Form 10-Q, and our current reports on Form 8-K.

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

Since our inception, we have incurred cumulative net losses which, as of March 31, 2006, total approximately $323.7 million. Moreover, our negative cash flow and losses from operations will continue for the foreseeable future. We may never generate sufficient product revenue to become profitable. We also expect to have quarter-to-quarter fluctuations in revenues, expenses and losses, which could be significant. The amount and timing of product revenue recognition and cash flow may depend on whether potential customers for the molecular testing platform choose to enter into sales, reagent rentals, cost-per-test or development site transactions. We believe our future operating results may be subject to quarterly fluctuations due to a variety of factors, including, but not limited to, goodwill or other impairment charges, non-cash stock option expenses, market acceptance of the second generation NanoChip® 400 System, acquisitions, and potential other products under development, including the CHF product and diagnostics related to infectious disease, the type of acquisition program our potential customers may choose, whether and when new products are successfully developed and introduced by us or our competitors, and the achievement of milestones under our collaborative agreements various government and private agencies. The recognition of revenue under contracts, grants and sponsored research agreements will be subject to significant fluctuations in both timing and amount and therefore our results of operations for any period may not be comparable to the results of operations for any other period.

To develop and sell our products successfully, we may need to increase our spending levels in research and development, as well as in selling, marketing and administration. We may have to incur these increased spending levels before knowing whether our products can be sold successfully.

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

We will need to raise more money to continue the research and development necessary to further develop our current products to bring our products to market and to further our manufacturing and marketing capabilities. We may seek additional funds through our equity line of credit with Azimuth Opportunity Ltd., public and private stock offerings, arrangements with corporate partners, borrowings under lease lines of credit or other sources. If we can not raise more money, we will have to reduce our capital expenditures, scale back our development of new products, significant reduce our workforce and seek to license to others products or technologies that we otherwise would seek to commercialize ourselves. The amount of money we will need will depend on many factors, including among others:

- the amount of revenue we are able to generate;
- the progress of our research and development programs;
- the commercial arrangements we may establish;
- the time and costs involved in:

scaling up our manufacturing capabilities;

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meeting regulatory requirements, including meeting necessary Quality System Regulations (QSRs) and obtaining necessary domestic and international regulatory clearances or approvals;

acquisition(s) or investment(s) into other businesses;

filing, prosecuting, defending and enforcing patent claims and litigation; and

the scope and results of our future clinical trials, if any.

Additional capital may not be available on terms acceptable to us, or at all. Any additional equity financing will be dilutive to stockholders, and debt financing, if available, may include restrictive covenants and require significant collateral. In addition, our ability to raise capital through our equity line of credit with Azimuth is subject to the satisfaction of certain terms and conditions set forth in our agreement with Azimuth, and there is no assurance that we will meet these conditions at the times we intend to raise capital through the equity line.

If our products are not successfully developed or commercialized, we could be forced to curtail or cease operations.

We are at an early stage of development. As of March 31, 2006, we had only a limited product offering that includes real-time PCR products (both custom and proprietary tests), molecular testing platforms (NanoChip® system), ASRs, cardiac tests and the point-of-care diagnostic tests for myocardial infarction and drugs of abuse. Our congestive heart failure point of care test remains in development. Our second generation molecular testing platform, the NanoChip® 400, began shipping in October 2005. Most of our ASRs are under development. Our molecular testing platforms, ASRs products may not be successfully developed or commercialized on a timely basis, or at all. If we are unable, for technological or other reasons, to complete the development, introduction or scale-up of manufacturing of our new products, or if our products do not achieve a significant level of market acceptance, we would be forced to curtail or cease operations.

We are also party to transactions known as reagent rentals and cost-per-test agreements. Under these types of transactions, we place molecular testing systems at a customer site with no upfront cost to the customer. The value of the instrument is typically recaptured through a contracted stream of future reagent sales, sold at a premium to cover the cost of the system. These reagent rentals and cost-per-test agreements result in us investing current capital in the cost of an instrument, while revenues recognized and cash received under these agreements are over the life of the contract, as reagents are shipped to the customer.

Lack of market acceptance of our products and technology would harm us.

Our success will depend upon our ability to continue to overcome significant technological challenges and successfully introduce our products into the marketplace. A number of applications envisioned by us may require significant enhancements to our basic technology platform. There can be no assurance that we can successfully develop such enhancements.

Although we have developed a number of products as discussed above, we may not be able to further develop these products or to develop other commercially viable products. Even if we develop a product, it may not be accepted in the marketplace. If we are unable to achieve market acceptance, we will not be able to generate sufficient product revenue to become profitable. We may also be forced to carry greater inventories of our products for longer periods than we may have anticipated. If we are unable to sell the inventory of our products in a timely fashion and at anticipated price levels, we may not become profitable. In addition, we may have to take accounting charges and reduce the value of our product inventory to its net realizable value. In the three months ended March 31, 2005 and in twelve month ended December 31, 2005, we did not incur any charge to reduce our inventory to its net realizable value; however, in the years ended December 31, 2004, 2003, and 2002, we took accounting charges of approximately $3.7 million, $908,000 and $424,000, respectively, to reduce product inventory to its estimated net realizable value. If actual future demand or market conditions are less favorable than those currently projected by us, additional inventory write-downs may be required.

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Market acceptance will depend on many factors, including our ability to:

- convince prospective strategic partners and customers that our technology is an attractive alternative to other technologies;
- manufacture products in sufficient quantities with acceptable quality and at an acceptable cost; and
- sell, place and service sufficient quantities of our products.

In addition, our technology platform could be harmed by limited funding available for product and technology acquisitions by our customers, internal obstacles to customer approvals of purchases of our products and market conditions in general. Performance issues with our products may also harm market acceptance of our products and reduce our revenues. During the year ended December 31, 2004, certain clinical laboratories experienced performance issues with our cystic fibrosis analyte specific reagent, CFTR ASR, which negatively impacted our revenue. In the first quarter of 2006, we began offering new reagents for CFTR ASRs and we may not be able to address product issues to the satisfaction of our customers and they may decide to adopt alternative products or may not resume purchases of our CFTR ASRs.

Commercialization of some of our potential products depends on collaborations with others. If our collaborators are not successful or if we are unable to find collaborators in the future, we may not be able to develop these products. Our strategy for the research, development and commercialization of some of our products requires us to enter into contractual arrangements with corporate collaborators, licensors, licensees and others. Our success depends in part upon the performance by these collaboration partners and potential collaboration partners of their responsibilities under these arrangements. Some collaborators may not perform their obligations as we expect, and we may not derive any revenue or other benefits from these arrangements. We do not know whether our collaborations will successfully develop and market any products under our respective agreements. Moreover, some of our collaborators are also researching competing technologies targeted by our collaborative programs.

Our molecular testing systems platforms, including Molecular Biology Workstation and the second-generation NanoChip® 400, are manufactured by Hitachi. As such our success in the molecular testing based diagnostics market is largely dependent upon Hitachi s ability to perform under our manufacturing agreement.

Through SynX we were a party to a 2001 development and manufacturing agreement between SynX and Princeton BioMeditech Corporation (PBM) to jointly develop and market various point-of-care tests for certain biomarkers and protein targets. As of January 2006, we terminated all of our previous agreements with PBM and superseded them with renegotiated contracts. These contracts include a manufacturing and distribution agreement and a development agreement. We agreed to continue the joint development of a point-of-care instrument that incorporates PBM s proprietary technology, our proprietary reagents and an exclusive license between us and Roche Diagnostics GmbH. PBM is responsible for the development of an instrument that uses our reagents to determine the amount of target NT-proBNP present in a patient. We are required to develop and manufacture the reagents used in the instrument and supply them to PBM who manufacture the test device. We also have to conduct the testing of our reagents required to obtain regulatory approval to market and sell them. As a result, our success in the point-of-care market is dependent in part upon PBM s ability to perform under these agreements.

We may be unsuccessful in entering into other collaborative arrangements to develop and commercialize our products. In addition, disputes may arise over ownership rights to intellectual property, know-how or technologies developed with our collaborators.

The transition to new products subjects us to risks and uncertainties including undetected defects or unexpected technical or operational problems which could adversely affect our business.

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In October 2005, we announced the release of our second-generation instrument system, the NanoChip® 400. Risks inherent in the transition to our second-generation system and other new products we may release in the future include the following:

- potential delays in initial shipments of new products;
- undetected defects or unexpected technical or operational problems with the new products;
- the possibility that new products may erode demand for our current products, including those under reagent rental agreements;
- a decline in sales of our molecular testing instrumentation and as a result a build-up of an excessive, obsolete supply of inventory;
- potential delays in customer purchases in anticipation of new product releases or a decision by customers to evaluate new products for longer periods of time before making a purchase;
- uncertainties in product pricing and market acceptance; and
- additional costs related to providing customer support and service for both first generation and second generation systems.

The occurrence of any one of the foregoing factors could negatively impact our financial results, delay market acceptance of our products, divert our development resources, or otherwise have an adverse effect on our business.

If our acquisitions are unsuccessful, our business may be harmed.

As part of our business strategy, we have acquired companies, technologies and product lines to complement our internally developed products. We expect that acquisitions will remain a part of our growth strategy going forward. Acquisitions involve numerous risks, including the following:

- The possibility that we will pay more than the value we derive from the acquisition, which could result in future non-cash impairment charges such as the $59 million non-cash goodwill impairment charge recorded in the fourth quarter of 2005;
- Difficulties in integration of the operations, technologies, and products of the acquired companies, which may require significant attention of our management that otherwise would be available for the ongoing development of our business;
- The assumption of certain known and unknown liabilities of the acquired companies; and
- Difficulties in retaining key relationships with employees, customers, partners and suppliers of the acquired company.

Any of these factors could have a negative impact on our business, results of operations or financing position.

Future acquisitions could also result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities and/or amortization expenses related to certain intangible assets and increased operating expenses, which could adversely affect our results of

operations and financial condition. Further, any additional equity financing, debt financing, or credit facility used for such acquisition may not be on satisfactory terms, and any such financing or facility may place restrictions on our business. In addition, to the extent that the economic benefits associated with any of our acquisitions diminish in the future, we may be required to record additional write downs of goodwill, intangible assets or other assets associated with such acquisitions, which would adversely affect our operating results.

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We may not realize the benefits that we anticipate from our recent acquisitions of the rapid cardiac immunoassay test business of Spectral Diagnostics, of Epoch Biosciences, Inc., SynX Pharma Inc. or the diagnostic business of Amplimedical or other acquisitions due to integration and other challenges.

On February 6, 2006, we completed the acquisition of the rapid cardiac immunoassay test business of Spectral Diagnostics (Spectral). In 2004, we completed two significant acquisitions: the acquisition of SynX Pharma, Inc. (SynX) in April 2004 and Epoch Biosciences, Inc. (Epoch) in December 2004. In May 2006, we completed the acquisition of the diagnostic business of Amplimedical. We expect that the Spectral and SynX product lines will accelerate our entry into the point-of-care market. However, we cannot be certain that we will achieve these and other benefits which we currently expect from these acquisitions. The process of integrating these and other acquired companies requires, significant efforts and expenditures, including the coordination of information technologies, research and development, sales and marketing, administration and manufacturing. Combining our product offerings with those of acquired companies is a complex and lengthy process involving a number of steps in which we will seek to achieve increasing degrees of integration of our products. Additionally, Spectral and SynX are located in Canada, Epoch is located in the state of Washington and Amplimedical is located in Italy, and because our facilities in San Diego, California are or may be physically separated from facilities of other companies we acquire, it may be difficult for us to communicate effectively with, manage and integrate these employees and operations with the rest of the Company. If we are not able to integrate the operations of these acquired companies and businesses successfully, we may not be able to meet our expectations of future results of operations.

Factors that will affect the success of these acquisitions and any future acquisitions include the following:

- our ability to manage a more complex corporate structure that requires additional resources for such responsibilities as tax planning, foreign currency management, financial reporting and risk management;
- our ability to retain key employees of acquired companies;
- our ability to increase revenues due to the integration of the products and technologies of the acquired companies; and
- our ability to operate efficiently following the completion of acquisitions and to achieve cost savings.

Even if we are able to successfully integrate our acquired operations, we may never realize the anticipated benefits of the SynX, Epoch, Spectral, Amplimedical acquisitions, or any other acquisition. Our failure to achieve these benefits and synergies could have a material adverse effect on our business, results of operations and financial condition.

Changes in financial accounting standards related to share-based payments are expected to continue to have a significant effect on our reported results.

On January 1, 2006, we adopted the revised statement of Financial Accounting Standards (SFAS) No. 123R, Share-Based Payment, which requires that we record compensation expense in the statement of operations for share-based payments, such as employee stock options, using the fair value method. The adoption of this new standard is expected to continue to have a significant effect on our reported earnings, although it will not affect our cash flows, and could adversely impact our ability to provide accurate guidance on our future reported financial results due to the variability of the factors used to estimate the values of share-based payments. If factors change and we employ different assumptions in the application of SFAS No. 123R in future periods, the compensation expense that we record under SFAS No. 123R may differ significantly from what we have recorded in the current period, which could negatively affect our stock price and our stock price volatility.

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Competing technologies may adversely affect us.

We expect to encounter intense competition from a number of companies that offer products in our targeted application areas. We anticipate that our competitors in these areas will include:

- health care and other companies that manufacture laboratory-based tests and analyzers;
- diagnostic and pharmaceutical companies;
- companies developing drug discovery technologies;
- companies developing molecular diagnostic tests; and
- companies developing point-of-care diagnostic tests.

If we are successful in developing products in these areas, we will face competition from established companies and numerous development-stage companies that continually enter these markets. In many instances, our competitors have substantially greater financial, technical, research and other resources and larger, more established marketing, sales, distribution and service organizations than us. Moreover, these competitors may offer broader product lines and have greater name recognition than us and may offer discounts as a competitive tactic.

In addition, several development-stage companies are currently making or developing products that compete with or will compete with our potential products. Our competitors may succeed in developing, obtaining approval from the FDA or marketing technologies or products that are more effective or commercially attractive than our current or potential products or that render our technologies and current or potential products obsolete.

As these companies develop their technologies, they may develop proprietary positions that may prevent us from successfully commercializing products.

Also, we may not have the financial resources, technical expertise or marketing, distribution or support capabilities to compete successfully in the future.

The uncertainty of patent and proprietary technology protection may adversely affect us.

Our success will depend in part on obtaining, maintaining and enforcing meaningful patent protection on our inventions, technologies and discoveries. Our ability to compete effectively will depend on our ability to develop and maintain proprietary aspects of our technology, and to operate without infringing the proprietary rights of others, or to obtain rights to third-party proprietary rights, if necessary. Our pending patent applications may not result in the issuance of patents. Our patent applications may not have priority over others applications, and even if issued, our patents may not offer protection against competitors with similar technologies. Any patents issued to us may be challenged, invalidated or circumvented, and the rights created thereunder may not afford us a competitive advantage. Budgetary concerns may cause us to not file, or continue, litigation against known infringers of our patent rights, or may cause us not to file for, or pursue, patent protection for all of our inventive technologies in jurisdictions where they may have value.

We also rely upon trade secrets, technical know-how and continuing inventions to develop and maintain our competitive position. Others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology and we may not be able to meaningfully protect our trade secrets, or be capable of protecting our rights to our trade secrets. We seek to protect our technology and patents, in part, by confidentiality agreements with our employees and contractors. Our employees may breach their existing confidentiality agreements and these agreements may not protect our intellectual property. This could have a material adverse effect on us.

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Our products could infringe on the intellectual property rights of others, which may subject us to future litigation and cause us to be unable to license technology from third parties.

Our commercial success also depends in part on us neither infringing valid, enforceable patents or proprietary rights of third parties, nor breaching any licenses that may relate to our technologies and products. We are aware of other third-party patents that may relate to our technology. It is possible that we may unintentionally infringe these patents or other patents or proprietary rights of third parties. In the past, we and the companies we have acquired have received, and may in the future receive, notices claiming infringement from third parties as well as invitations to take licenses under third-party patents which have, in some instances, resulted in litigation, settlement of litigation and our licensing of third party intellectual property rights. In particular, the receipt of infringement notices by us may subject us to costly litigation, divert management resources and result in the invalidation of our intellectual property rights. These claims may require us to pay significant damages, cease production of infringing products, terminate our use of infringing technologies or develop non-infringing technologies. Further, any legal action against us or our collaborative partners claiming damages and seeking to enjoin commercial activities relating to our products and processes affected by third-party rights may require us or our collaborative partners to obtain licenses in order to continue to manufacture or market the affected products and processes. These actions may also subject us to liability for damages. Although in the past we and the companies we have acquired have succeeded in settling some third party claims concerning alleged infringement of intellectual property rights, which settlements have involved the payment of royalties by us or such companies we have acquired, there can be no assurance that in the future we would be successful in settling such claims. In addition, there can be no assurance that, even if such settlements are achieved, that they would be on commercially reasonably terms or would not otherwise have a material adverse impact on the company s business. We or our collaborative partners may not prevail in an action and any license required under a patent may not be made available on commercially acceptable terms, or at all.

There are many U.S. and foreign patents and patent applications held by third parties in our areas of interest, and we believe that there may be significant other litigation in the industry regarding patent and other intellectual property rights. Additional litigation could result in substantial costs and the diversion of management s efforts regardless of the result of the litigation. Additionally, the defense and prosecution of interference proceedings before the U.S. Patent and Trademark Office, or USPTO, and related administrative proceedings would result in substantial expense to us and significant diversion of effort by our technical and management personnel. We may in the future become subject to other USPTO interference proceedings to determine the priority of inventions. In addition, laws of some foreign countries do not protect intellectual property to the same extent as do laws in the U.S., which may subject us to additional difficulties in protecting our intellectual property in those countries.

We have opposed one allowed European patent granted to Oxford Gene Technology that had broad claims to array technology for analyzing a predetermined polynucleotide sequence. We opposed the grant of that European patent, and Oxford Gene Technology subsequently narrowed its claims. However, we are still opposing such narrower claims before the European Patent Office s Opposition Division. Even if Oxford Gene Technology successfully defends its current, narrower claims, and even if a patent is subsequently granted for such claims, we do not believe that our product will infringe upon such claims. Nonetheless, Oxford Gene Technology may still later assert that some of our products infringe upon its patents that Oxford Gene Technology may obtain from time to time. If the decision of the Opposition Division is successfully appealed by Oxford Gene and the original claims are reinstated, or if an application relating to arrays is issued in another country with claims as broad as the original European patent, we could be subject to infringement accusations that could delay or preclude sales of some of our anticipated diagnostic products.

We may continue to be involved in intellectual property litigation that may be costly, time-consuming and may impact our competitive position.

In December 2002, Oxford Gene filed a complaint against us in the United States District Court for the District of Delaware claiming that we infringe U.S. Patent No. 6,054,270 entitled Analytical Polynucleotide Sequences. In April 2003, we filed an answer to the complaint that denied that we infringe this patent. In

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October 2003, we entered into a tolling agreement with Oxford Gene pursuant to which the lawsuit was dismissed by Oxford Gene without prejudice. Under the tolling agreement, we are obligated to give Oxford Gene notice if we determine that we desire to commercialize DNA arrays for use in certain assay formats. If that notice is given, we and Oxford Gene are obliged to discuss in good faith for 30 days whether we wish to acquire, and whether Oxford Gene is willing to grant a license under the patent involved in the litigation. If we and Oxford Gene are unable to enter into such a license or other agreement within such 30 days, Oxford is free to re-initiate the litigation.

On June 30, 2005, we gave Oxford Gene notice that we desired to commercialize DNA arrays for use in such assay formats. Oxford Gene is now free to re-initiate the litigation against us under the tolling agreement. If the litigation were to be reinitiated, significant attorneys costs and fees could result. Although it is our position that Oxford Gene s assertions of infringement have no merit, neither the outcome of any further litigation nor the amount and range of potential fees can be assessed. No assurances can be given that we would prevail in any future lawsuits or that we could successfully defend ourselves against any future claims.

The regulatory clearances and approvals required to manufacture, market and sell our products are uncertain, and our failure to comply with such clearances and approvals could have a material adverse effect on our company.

Unless otherwise exempt, medical devices require FDA approval or clearance prior to marketing in the United States. We believe our currently marketed products, including general laboratory instruments and analyte specific reagents as well as certain of those products we intend to market in the future, other than our CHF test in development and assets we acquired in our Spectral acquisition, are not subject to 510(k) clearance or premarket approval requirements. As a result, to date we have not applied for FDA or any other regulatory approvals or clearances with respect to any of our products other than with respect to our CHF test. Obtaining 510(k) clearance and premarket approval may be time-consuming, expensive and uncertain. The regulatory approval or clearance process required to manufacture, market and sell our existing and future products is currently uncertain. If the FDA or other regulatory authorities assert that our products are subject to 510(k) clearance and premarket approval requirements or other similar procedures, our business may experience incremental costs, increased regulatory risks and production delays. In addition, we could be subject to:

- the recall or seizure of our products;
- total or partial suspension of the production of our products;
- the failure of the government to grant premarket clearance or premarket approval for our devices or the withdrawal of marketing clearances or approvals once granted to us;
- substantial delay in the manufacture or sale of our current or future products;
- limitations on intended uses imposed as a condition of approvals or clearances; or
- criminal prosecution, civil penalties, other administrative sanctions or judicially imposed sanctions, such as injunctions.

We received an untitled letter from the FDA on August 12, 2005, regarding the NanoChip® Molecular Biology Workstation, the NanoChip® Microarray, and certain of our ASRs in which the FDA stated that the Workstation, Microarray, and ASRs appear to be promoted to work together as an integrated system and that there are inconsistencies with the labeling and the representations of the intended use of our products. The FDA further stated that these products as labeled are considered medical devices and subject to the requirements of the premarket approval or clearance process. The FDA requested that we respond within 30 days and indicated that we could request a meeting with the FDA to discuss the matter. We have submitted a written response to the FDA in which we have clarified that these products are not intended to be linked together. We also stated in our written response that we will revise certain of our marketing materials to address the FDA s concerns regarding the labeling and representations of intended use of our products. We have also requested and had a meeting with the FDA to discuss the matter. We believe we had an open and productive discussion with the FDA representatives as to the appropriateness of the labeling of our various products in this highly regulated area.

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There can be no assurance that the FDA will agree with our position that with these revisions our products are not subject to 510(k) clearance or the premarket approval process. The FDA may ultimately require, or we may determine it appropriate, to submit our existing or future products to the premarket approval process or the 510(k) clearance process, either of which may be time-consuming, expensive and uncertain. In addition, if we submit our current products to the premarket approval process or the 510(k) clearance process, it is unclear what the impact would be on our products that have been or are being sold without such approvals. We may be allowed to continue to market our current products pending the outcome of the clearance or approval process for each product, but there can be no assurance that the FDA would not require us to withdraw one or more of our products from the marketplace pending receipt of such approvals or clearances.

Furthermore, the FDA could determine that other products we manufacture or sell or intend to manufacture or sell, including the second-generation NanoChip® 400, also are subject to the premarket approval process or the 510(k) clearance process. If the FDA makes any such determination or otherwise disagrees with our position, the FDA could preclude us from manufacturing or shipping the NanoChip® 400 until we have received FDA clearance. The FDA could also revise its definition of analyte specific reagents in a manner that might cause our current or future analyte specific reagents to be subject to the 510(k) clearance process. In addition, the FDA could subject us to any of the penalties described above, including administrative or judicially imposed sanctions and the recall or seizure of our products. Any such result could substantially delay the release of our current and future products. Furthermore, any such result would have a material adverse effect on our business, financial position and results of operations, and the market value of our common stock could decline.

The regulatory approval process for our products may be expensive, time-consuming and uncertain.

To the extent that our products require FDA or other regulatory approval or clearance prior to marketing, such regulatory approval process may be expensive, time-consuming, uncertain and may prevent us from obtaining or maintaining required approvals for the commercialization of our products, which may have a significant impact on our business. It generally takes at least three to six months from the time of submission or more to obtain 510(k) clearance, but the process may take longer if the FDA requests more data or research. The premarket approval process takes between one and two years from the time of submission. Regulatory clearance or approval of any of our products may not be granted by the FDA or foreign regulatory authorities for several years, if at all. Our failure to obtain required approvals from regulatory authorities could have a material adverse effect on our business, results of operations and financial condition. In other countries, the manufacture or sale of our products may require approval by local government agencies with missions comparable to the FDA s. The process of obtaining any such approval may also be lengthy, expensive and uncertain.

We expect to submit some of our products in the future to the 510(k) clearance process or premarket approval process and, as such, expect to incur significant expenses in order to receive such clearances or approvals. We also cannot predict the likelihood of obtaining such clearances or approvals. The failure to obtain such clearances or approvals could prevent the successful development, introduction and marketing of certain of our products, and could cause the market price for our stock to decline.

In addition, whether or not our products are subject to 510(k) clearance or premarket approval, we are subject to certain FDA regulations covering, among other things, manufacturing, promotions and medical device reporting. For instance, manufacturing facilities are required to adhere to the FDA s current Quality System Regulations, including extensive record keeping and reporting and periodic inspections of our manufacturing facilities. Similar requirements are imposed by foreign governmental agencies. Compliance with these regulations requires substantial expenditures of time, money and effort in such areas as production and quality control to ensure full compliance. Failure to comply with such regulations at one of our manufacturing facilities could result in an enforcement action brought by the FDA, which could include withholding the approval of products manufactured at that facility.

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If we are unable to manufacture products on a commercial scale, our business may suffer.

Hitachi manufactures our NanoChip® System, including the second-generation NanoChip® 400; PBM will manufacture certain of our point-of-care products; and we manufacture our NanoChip® Cartridges, our ASRs, the cardiac product line acquired from Spectral, and most of our other products. We, Hitachi and PBM rely on subcontractors to manufacture the limited quantities of microchips and other components we require for use by and sale to our customers, as well as for internal and collaborative purposes. Manufacturing, supply and quality control problems may arise as we, Hitachi or PBM either alone, together or with subcontractors, attempt to further scale up manufacturing procedures or to manufacture new products. We, Hitachi or PBM may not be able to scale-up in a timely manner or at a commercially reasonable cost. Problems could lead to delays or pose a threat to the ultimate commercialization of our products and cause us to fail. We, Hitachi or PBM or any of our contract manufacturers could encounter manufacturing difficulties, including those relating to:

the ability to scale up manufacturing capacity;

production yields;

quality control and assurance; or

shortages of components or qualified personnel.

Our manufacturing facilities and those of Hitachi and PBM and any other of our contract manufacturers are or will be subject to periodic regulatory inspections by the FDA and other federal, state and international regulatory agencies and these facilities are or may become subject to Quality System Regulation, or QSR, requirements of the FDA. If we, Hitachi, PBM or our third-party manufacturers, fail to maintain facilities in accordance with QSR regulations, other international quality standards or other regulatory requirements, then the manufacture process could be suspended or terminated which would harm us.

Our dependence on suppliers for materials could impair our ability to manufacture our products.

Outside vendors provide key components and raw materials used by us, Hitachi and PBM in the manufacture of our products. Although we believe that alternative sources for these components and raw materials are available, any supply interruption in a limited or sole source component or raw material would harm our and Hitachi s or PBM s ability to manufacture our products until a new source of supply is identified and qualified, including qualification under applicable FDA regulations. In addition, an uncorrected defect or supplier s variation in a component or raw material, either unknown to us, Hitachi or PBM or incompatible with our, Hitachi or PBM s manufacturing processes, could harm our, Hitachi or PBM s ability to manufacture our products. We, Hitachi or PBM may not be able to find a sufficient alternative supplier in a reasonable time period, or on commercially reasonable terms, if at all. If we, Hitachi or PBM fail to obtain a supplier for the manufacture of components of our products, we may be forced to curtail or cease operations.

Lead times for obtaining materials and components for our products and the manufacturing and introduction of our products may vary significantly which could lead to excess inventory levels as well as shortages of critical components and products if our supply and demand forecasts are inaccurate.

We anticipate that our products, including our ASRs and most of our other products will be manufactured and introduced by us and third parties, if any, based on forecasted demand and that we will seek to purchase components and materials in anticipation of the actual receipt of purchase orders from our customers. Lead times for materials and components to be included in our products vary significantly and may depend on factors such as the business practices of each specific supplier and the terms of the particular contracts, as well as the overall market demand for such materials and components at any given time. Also, we often rely on our own and third party forecasted demand for various products and the accuracy of such forecasts may depend on a number of factors, including but not limited to, government reports and recommendations for certain genetic testing, regulatory burdens, competitive products, the nature and effectiveness of our products, the timing and extent of the introduction of our products into the marketplace and other factors. If the forecasts are inaccurate, we could experience fluctuations in excess inventory of our products, or shortages of critical components or products, either of which could cause our business to suffer.

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We currently rely on one manufacturer of our NanoChip® 400 as well as our Workstation and other hardware products, and we will rely on another manufacturer for our some of point-of-care products, and such reliance may delay the manufacture and shipment of our products to customers.

We have signed an exclusive manufacturing agreement with Hitachi to manufacture our second generation NanoChip® 400 workstations and other hardware products to be developed by us. In addition, we have an exclusive manufacturing agreement with PBM for the manufacture of certain future point-of-care products, including CHF tests.

Because we are solely dependent on these other companies for the manufacture of these products, any disruption in either of these companies businesses or in our relationship with such companies may have a material adverse effect on our business. To the extent we have adverse developments in our relationship with Hitachi or PBM, or to the extent we develop contractual disputes, it may have an adverse impact on our business, our ability to implement existing products or launch new products. In particular, to the extent we seek to amend, modify or extend or otherwise change aspects of our contractual relationship with either of these parties, we may experience manufacturing delays associated with negotiating the terms of those arrangements and other related complications. If we determine to curtail or terminate our manufacturing relationship with either of these parties, a lengthy process would be required to negotiate and begin work under a manufacturing agreement with a new manufacturer which could disrupt our manufacturing process and harm our business. Furthermore, the manufacturing of certain point-of-care products, including CHF tests, depends on certain intellectual property owned by PBM and licensed by PBM from third parties, and we may not be able to manufacture or find an alternative manufacturer of the design of these products without this intellectual property, which would severely impact our point-of-care products.

The number of our sales and marketing employees may not result in corresponding numbers of sales or placements of the NanoChip®System, the sale of ASRs, point-of-care diagnostic products or other Nanogen products.

As of March 31, 2006, we had 31 total employees in our worldwide sales and marketing group.

Developing, training and monitoring this sales and marketing force has required and will further require capital and time expenditures by us and certain of our employees. The size of our sales and marketing force may not result in corresponding numbers of sales or placements of the NanoChip® System nor increased product revenues associated with such sales or placements or our ASRs, point-of-care diagnostic products or other products. We may be required to increase or decrease the size of the sales and marketing force as deemed necessary and such increases or decreases in staff will require additional capital and time expenditures by us and our employees.

Failure to expand our international sales as we intend would reduce our ability to become profitable.

We expect that a portion of our sales will be made outside the United States. A successful international effort will require us to develop relationships with international customers and partners. We may not be able to identify, attract or retain suitable international customers and distribution partners. As a result, we may be unsuccessful in our international expansion efforts. Furthermore, expansion into international markets will require us to continue to establish and expand foreign sales and marketing efforts, hire additional sales and marketing personnel and maintain good relations with our foreign customers and distribution partners. International operations involve a number of risks not typically present in domestic operations, including:

- currency fluctuation risks;
- changes in regulatory requirements;
- political and economic instability, including the war on terrorism; and
- difficulties in staffing and managing foreign offices.

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In addition, we expect increased costs in deploying the NanoChip® System, including the second-generation NanoChip® 400, ASRs, point-of-care diagnostics, and other products in foreign countries due to:

- licenses, tariffs and other trade barriers;
- costs and difficulties in establishing and maintaining foreign distribution partnerships;
- potentially adverse tax consequences; and
- the burden of complying with a wide variety of complex foreign laws and treaties.

Our international sales and marketing efforts will also be subject to the risks associated with the imposition of legislation and regulations relating to the import or export of high technology products. We cannot predict whether tariffs or restrictions upon the importation or exportation of our products will be implemented by the United States or other countries.

We may lose money when we exchange foreign currency received from international sales into U.S. dollars. A portion of our business is expected to be conducted in currencies other than the U.S. dollar. We recognize foreign currency gains or losses arising from our operations in the period incurred. As a result, currency fluctuations between the U.S. dollar and the currencies in which we do business will cause foreign currency transaction gains and losses. We cannot predict the effects of exchange rate fluctuations upon our future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates. We currently do not engage in foreign exchange hedging transactions to manage our foreign currency exposure.

We may have significant product liability exposure.

We face an inherent business risk of exposure to product liability and other claims in the event that our technologies or products are alleged to have caused harm. These risks are inherent in the testing, manufacturing and marketing of our products. In addition, we began a targeted acquisition strategy during 2004, and our due diligence of acquired companies may fail to reveal material risks relating to product liabilities of such companies. Any product liability claim brought against us could be expensive to defend and could result in a diversion of management s attention from our core business. We may be required to pay substantial damages in connection with any product liability claims. A successful product liability claim or series of claims could have an adverse effect on our business, financial condition and results of operations. Further, we may not be able to maintain adequate levels of product liability insurance at reasonable cost or reasonable terms. Excessive insurance costs or uninsured claims would add to our future operating expenses and adversely affect our financial condition.

If we lose our key personnel or are unable to attract and retain additional personnel, we may not be able to pursue collaborations or develop our own products.

We are highly dependent on the principal members of our scientific, manufacturing, marketing, administrative, management and executive personnel, the loss of whose services might significantly delay or prevent the achievement of our objectives. We face competition from other companies, academic institutions, government entities and other organizations in attracting and retaining personnel. For the three months ended March 31, 2006 and twelve months ended December 31, 2005, 2004 and 2003, we experienced turnover rates of 4%, 17%, 27% and 25%, respectively. Turnover at these rates may continue and, if they continue, may adversely affect us.

The turnover rates above exclude the impact of reductions in workforce. In April 2003, we reduced our workforce by approximately 20% and incurred a severance charge of approximately $500,000 in the second quarter of 2003. Future layoffs could have an adverse effect on us.

Health care reform and restrictions on reimbursement may adversely affect our business.

In recent years, health care payors as well as federal and state governments have focused on containing or reducing health care costs. We cannot predict the effect that any of these initiatives may have on our business,

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and it is possible that they will adversely affect our business. Health care cost containment initiatives focused on genetic testing could cause the growth in the clinical market for diagnostic testing to be curtailed or slowed. In addition, health care cost containment initiatives could cause pharmaceutical companies to reduce research and development spending. In either case, our business and our operating results would be harmed. In addition, diagnostic testing in clinical settings is often billed to third-party payors, including private insurers and governmental organizations. If our current and future clinical products are not considered cost-effective by these payors, reimbursement may not be available to users of our products. In this event, potential customers would be much less likely to use our products, and our business and operating results could be seriously harmed.

In addition, sales of our future products may depend, in large part, on the availability of adequate reimbursement to users of those products from government insurance plans, managed care organizations and private insurance plans. Physicians recommendations to use our products may be influenced by the availability of reimbursement by insurance companies and other third-party payors. There can be no assurance that insurance companies or third-party payors will provide coverage for our products or that reimbursement levels will be adequate for the reimbursement of the providers of our products. In addition, outside the United States, reimbursement systems vary from country to country and there can be no assurances that third-party reimbursement will be made available at an adequate level, if at all, for our products under any other reimbursement system. Lack of or inadequate reimbursement by government or other third-party payors for our products could have a material adverse effect on our business, financial condition and results of operations.

If ethical and other concerns surrounding the use of genetic information become widespread, we may have less demand for our products.

Genetic testing has raised ethical issues regarding confidentiality and the appropriate uses of the resulting information. For these reasons, governmental authorities may call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Any of these scenarios could reduce the potential markets for our products, which could seriously harm our business, financial condition and results of operations.

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

Our research and development processes involve the controlled storage, use and disposal of hazardous materials including, but not limited to, biological hazardous materials and radioactive compounds. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, the risk of accidental contamination or injury from hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of our insurance. We may not be able to maintain insurance on acceptable terms, or at all. We could be required to incur significant costs to comply with current or future environmental laws and regulations.

Our stock price could continue to be highly volatile and our stockholders may not be able to resell their shares at or above the price they paid for them.

The market price of our common stock, like that of many other life sciences companies, has been highly volatile and is likely to continue to be highly volatile. The following factors, among others, could have a significant impact on the market price of our common stock:

- period-to-period fluctuations in sales, inventories and our operating results;
- asset impairment charges, including goodwill and other intangible assets;
- adoption of new stock option expensing rules;

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the announcement of issues involving our liquidity;

that announcement of product development failures;

the announcement of financing or acquisitions that dilutes our equity;

the results of our premarket studies and clinical trials or those of our collaborators or competitors or for diagnostic testing in general;

evidence of the safety or efficacy of our potential products or the products of our competitors;

the announcement by us or our competitors of technological innovations or new products;

the announcement by us of acquisitions by customers of our molecular testing platforms, ASRs or our other products;

announcements by us of government or private grants or contracts or of failure to obtain such government or private grants or contracts;

announcements by us of involvement in litigation;

developments concerning our patents or other proprietary rights or those of our competitors, including other litigation or patent office proceedings;

loss of key board, executive, management or other personnel or the increase or decrease in size of our sales and marketing staff;

governmental regulatory actions or the failure to gain necessary clearances or approvals;

the ability to obtain necessary licenses;

changes or announcements in reimbursement policies;

developments with our subsidiaries and collaborators;

changes in or announcements relating to acquisition programs for our products, including the expiration or continuation of our development site agreements;

market conditions for life science stocks, nanotechnology stocks and other stocks in general;

purchases by Nanogen pursuant to our stock repurchase program;

changes in estimates of our performance by securities analysts and the loss of coverage by one or more securities analysts;

the announcement by us of any stock repurchase plan, any purchases made thereunder by us and any cessation of the program by us; and

changes in the United States war on terrorism and other geopolitical and military situations in which the country is involved.

Investor confidence and share value may be adversely impacted if our independent auditors are unable to provide us with the attestation of the adequacy of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act of 2002.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002, the SEC adopted rules requiring public companies to include a report of management on our internal controls over financial reporting in our annual reports on Form 10-K and quarterly reports on Form 10-Q that contains an assessment by management of the effectiveness of our internal controls over financial reporting. In addition, our independent auditors must attest to and report on management s assessment of the effectiveness of our internal controls over financial reporting as of the end of the fiscal year. How companies are maintaining their compliance with these requirements including internal control reforms, if any, to comply with the requirements of Section 404, and how independent auditors

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are applying these requirements and testing companies internal controls, remain subject to uncertainty. We expect that our internal controls will continue to evolve as our business activities change. In addition, the acquisitions we made during 2004, the acquisition of the rapid cardiac immunoassay test business of Spectral in 2006, and any future acquisitions we make may impact our ability to maintain effective internal controls over financial reporting. Further, if, during any year, our independent auditors are not satisfied with our internal controls over financial reporting, including the internal controls over financial reporting of SynX and Epoch, or the level at which these controls are documented, designed, operated, tested or assessed, or if the independent auditors interpret the requirements, rules or regulations differently than we do, then they may decline to attest to management s assessment or may issue a report that is qualified. This could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively impact the market price of our shares.

Our anti-takeover provisions could discourage potential takeover attempts and make attempts by stockholders to change management more difficult.

The approval of two-thirds of our voting stock is required to take some stockholder actions, including the amendment of any of the anti-takeover provisions contained in our certificate of incorporation or amendment of our bylaws.

Further, pursuant to the terms of our stockholder rights plan adopted in November 1998, as amended, we have distributed a dividend of one right for each outstanding share of common stock. These rights will cause substantial dilution to the ownership of a person or group that attempts to acquire us on terms not approved in advance by our board of directors and may have the effect of deterring unsolicited takeover attempts.

Our business is subject to changing regulation of corporate governance and public disclosure that has increased both our costs and the risk of noncompliance.

Because our common stock is publicly traded, we are subject to certain rules and regulations of federal, state and financial market exchange entities charged with the protection of investors and the oversight of companies whose securities are publicly traded. These entities, including the Public Company Accounting Oversight Board, the SEC and the Nasdaq National Market, have recently issued new requirements and regulations and continue to develop additional regulations and requirements in response to recent laws enacted by Congress, most notably the Sarbanes-Oxley Act of 2002. Our efforts to comply with these new regulations have resulted in, and are likely to continue to result in, increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities.

Moreover, because these laws, regulations and standards are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available. This evolution may result in continuing uncertainty regarding compliance matters and additional costs necessitated by ongoing revisions to our disclosure and governance practices.

We will be dependent upon our agreement with Applied Biosystems for a significant portion of our revenues for 2006 and future periods, and a reduction of sales under or early termination of this agreement would seriously harm our revenues and operating results and would likely cause our stock price to decline.

In January 1999, Epoch and Applied Biosystems entered into a License and Supply Agreement pursuant to which we licensed some of our technology to Applied Biosystems for use in its TaqMan® 5 - nuclease real-time PCR assays, (TaqMan® is a registered trademark of Roche Molecular Systems, Inc.). In July 1999, Epoch licensed its proprietary software, which speeds the design of oligonucleotide probes used in the study of genes, to Applied Biosystems. In August 2000, the agreement was amended to, among other things, to provide for Epoch manufacturing the product for Applied Biosystems. In July 2002 this agreement was further amended to remove the manufacturing rights from the contract effective October 2002, redefine product categories, increase the

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minimum royalties and royalty rates, and establish that minimum royalties are measured and paid quarterly. In January 2006, we renegotiated the contract with Applied Biosystems to maintain minimum quarterly payments through December 31, 2006 and convert to actual royalties thereafter. We will depend upon product sales and royalties from Applied Biosystems sales of its TaqMan® assays under this agreement for a significant portion of our license and royalty revenues in 2006 and future periods. Since the July 2002 and January 2006 amendments, quarterly royalties earned based on actual sales by Applied Biosystems have been less than the contractual minimum royalty levels. As a result, the royalty payments have been in the amount of the specified quarterly minimum level.

Although we expect this relationship to continue into the foreseeable future this contract can be terminated with a 180 day notice. In the event that this agreement is terminated, our revenues, financial condition and operating results would be adversely affected and our stock price would likely decline.

Our relationship with Jurilab subjects us to numerous risk and uncertainties.

In July 2005, we acquired a minority equity interest in Jurilab of approximately 17% and we hold two of Jurilab s four board of director seats. Our relationship with Jurilab subjects us to numerous risk and uncertainties, including:

- we have invested approximately $1.5 million in Jurilab and anticipate investing a similar amount in 2006 and we may lose all of our investment;
- we are required to consolidate Jurilab s financial statements with our own and as a result our operating results may be less predictable, subject to significant fluctuation beyond our control and adversely affected by the results of Jurilab;
- our relationship with Jurilab may require our management to devote substantial time and resources to Jurilab s business, which may adversely affect our business;
- we have the right to acquire Jurilab, and if we exercise this right, it would entail significant risks, which risks would be even more acute because Jurilab is an early stage company; and
- in the event we were to acquire Jurilab, we would likely be required to seek additional financing that may not be available to us on acceptable terms, or at all.

Terrorist attacks, war, natural disasters and other catastrophic events may negatively impact aspects of our operations, revenue, costs and stock price.

Threats of terrorist attacks in the United States of America, as well as future events occurring in response to or in connection with them, including, without limitation, future terrorist attacks or threats against United States of America targets, rumors or threats of war, actual conflicts involving the United States of America or its allies, including the on-going U.S. conflicts in Iraq and Afghanistan, further conflicts in the Middle East and in other developing countries, or military or trade disruptions affecting our domestic or foreign suppliers of merchandise, may impact our operations. Our operations also may be affected by natural disasters or other similar events, including floods, hurricanes, earthquakes or fires. Our California and Washington facilities, including our corporate offices and principal product development facilities, are located near major earthquake faults. The potential impact of any of these events to our operations includes, among other things, delays or losses in the delivery of products by us and sales of such products. Additionally, any of these events could result in increased volatility in the United States of America and worldwide financial markets and economies. Also, any of these events could result in economic recession in the United States of America or abroad. Any of these occurrences could have a significant impact on our operating results, revenue and costs and may result in the volatility of the future market price of our common stock.

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USE OF PROCEEDS

We will not receive any proceeds from the resale of shares of our common stock offered by the selling stockholder.

SELLING STOCKHOLDER

On May 1, 2006, we issued a convertible promissory note in the principal amount of approximately 6.1 million (or approximately $7.5 million) to Amplimedical as part of the consideration for the acquisition of Amplimedical s business division for the developing, manufacturing, testing, distributing and selling diagnostic products and diagnostic-related products. We issued the convertible promissory note in a transaction exempt from the registration requirements of the Securities Act of 1933, as amended, pursuant to Section 4(2) thereof.

The maturity date of the convertible promissory note is April 19, 2007. During the period beginning sixty-one (61) days after May 1, 2006 and ending on the date one hundred and eighty (180) days after May 1, 2006, the convertible promissory note will accrue interest at the rate of 6% per annum. During the period beginning one hundred and eighty-one (181) days after May 1, 2006 and ending on the date when the principal of the convertible promissory note is paid in full, the convertible promissory note will accrue interest at the rate of 10% per annum. The date upon which amounts under the convertible promissory note are due may be accelerated upon the occurrence of certain customary events of default, and in such circumstances, the convertible promissory note will accrue interest at the rate of 14% per annum until paid. Interest accrued on the convertible promissory note is due and payable monthly beginning on the first business day of the first full month after the date that is sixty-one (61) days after May 1, 2006.

The convertible promissory note is convertible into shares of our common stock by Amplimedical at any time and by us at any time after this registration statement is declared effective by the SEC. The initial conversion price is the average closing price of our common stock for ten (10) consecutive trading days ending two (2) business days prior to May 1, 2006, or approximately $2.63 per share (converted to Euros at the exchange rate stated in the Financial Times two business days prior to May 1, 2006, which is an exchange rate of 1.2442, or an average closing price of approximately 2.12 per share). The initial conversion price may be adjusted if (i) a registration statement is declared effective after sixty (60) days after May 1, 2006, and (ii) the average closing price of our common stock during a ten-day trading period prior to the effective date of the registration statement deviates more than 10% from the initial conversion price. The aggregate number of shares of common stock issuable upon conversion of the convertible promissory note is limited to less than 10% of our outstanding shares as of the date of the acquisition agreement, or April 19, 2006.

We may prepay the convertible promissory note at any time, and such prepayment will be made at a specified discount.

Pursuant to the acquisition agreement for the diagnostic division of Amplimedical, we agreed to register the shares of our common stock issuable upon conversion of the convertible promissory note issued to Amplimedical at our own expense. Pursuant to that agreement we have filed with the SEC a registration statement, of which this prospectus is a part, for the resale of those shares.

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The following table sets forth information regarding the beneficial ownership of our common stock by the selling stockholder as of May 1, 2006 and the number of shares of our common stock covered by this prospectus.

Name of Selling Stockholder	Beneficial Ownership of Selling Stockholder Prior to Offering(1)(2)		Number of Shares Offered	Beneficial Ownership of Selling Stockholder After Offering(3)	
	Number	Percentage(4)		Number	Percentage
Amplimedical S.p.A.	2,886,935	4.5	2,886,935		
Total	2,886,935	4.5	2,886,935		

(1) The number of shares beneficially owned is determined in accordance with Rule 13d-3 of the Exchange Act, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rule, beneficial ownership includes any shares as to which an individual has sole or shared voting power or investment power and also any shares which an individual has the right to acquire within 60 days of May 1, 2006. The shares listed in this column include shares underlying the convertible promissory note which the selling stockholder has the right to acquire within 60 days of May 1, 2006. The selling stockholder has sole voting and investment power with respect to its shares of common stock.

(2) Assumes the full conversion of the principal underlying the convertible promissory note at the initial conversion price of $2.63. Pursuant to Rule 416 of the Securities Act, this registration statement also shall cover any additional shares of common stock that become issuable in connection with the shares registered for sale hereby by reason of any stock dividend, stock split, or other similar transaction that results in an increase in the number of our outstanding shares of common stock.

(3) Assumes the sale of all shares being offered by this prospectus.

(4) The percentage ownership listed above is based on 60,958,452 shares of common outstanding May 1, 2006 and assumes the full conversion of the principal underlying the convertible promissory note at the initial conversion price of $2.63.

PLAN OF DISTRIBUTION

We are registering the shares of our common stock issuable upon conversion of the convertible promissory note on behalf of the selling stockholder. Sales of shares may be made by the selling stockholder from time to time on the Nasdaq National Market, any other exchange upon which our shares may trade in the future, in the over-the-counter market or otherwise, at market prices prevailing at the time of sale, at prices related to market prices, or at negotiated or fixed prices. The shares may be sold by various methods, including one or more of the following:

a block trade in which the broker or dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker or dealer as principal and resale by such broker or dealer for its account pursuant to this prospectus;

ordinary brokerage transactions and transactions in which the broker solicits purchasers;

market sales (both long and short to the extent permitted under securities laws);

in privately negotiated transactions;

in connection with short sales of the shares;

in connection with the writing of non-traded and exchange-traded call options in hedge transactions and in settlement of other transactions in standardized or over-the-counter options, if permitted under the securities laws; and

a combination of any of these methods of sale.

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The selling stockholder may effect these transactions by selling shares directly to purchasers or to or through broker-dealers, which may act as agents or principals. These broker-dealers may receive compensation in the form of discounts, concessions or commissions from the selling stockholder and/or the purchasers of shares for whom such broker-dealers may act as agents or to whom they sell as principals, or both (which compensation as to a particular broker-dealer might be in excess of customary commissions). The selling stockholder may also sell shares of common stock short and deliver shares covered by this prospectus to close out short positions, provided that the short sale is made after the registration statement is declared effective and a copy of this prospectus is delivered in connection with the short sale. The selling stockholder has advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their securities.

The selling stockholder may enter into hedging transactions with broker-dealers or other financial institutions. In connection with those transactions, the broker-dealers or other financial institutions may engage in short sales of the shares or of securities convertible into or exchangeable for the shares in the course of hedging positions they assume with the selling stockholder. The selling stockholder may also enter into options or other transactions with broker-dealers or other financial institutions which require the delivery of shares offered by this prospectus to those broker-dealers or other financial institutions. The broker-dealer or other financial institution may then resell the shares pursuant to this prospectus (as amended or supplemented, if required by applicable law, to reflect those transactions).

The selling stockholder and any broker-dealers that act in connection with the sale of shares may be deemed to be underwriters within the meaning of Section 2(11) of the Securities Act of 1933, and any commissions received by broker-dealers or any profit on the resale of the shares sold by them while acting as principals may be deemed to be underwriting discounts or commissions under the Securities Act. The selling stockholder may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares against liabilities, including liabilities arising under the Securities Act.

The selling stockholder may be subject to the prospectus delivery requirements of the Securities Act. The selling stockholder and any other person participating in the distribution of the shares will be subject to the applicable provisions of the Securities Exchange Act of 1934 and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares by the selling stockholder and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares to engage in market-making activities with respect to the shares of common stock.

The selling stockholder also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided they meet the criteria and conform to the requirements of Rule 144.

Upon being notified by the selling stockholder that a material arrangement has been entered into with a broker-dealer or underwriter for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required pursuant to Rule 424(b) under the Securities Act, disclosing:

- the name of the selling stockholder and of the participating broker-dealer(s) or underwriter(s);
- the number of shares involved;
- the initial price at which the shares were sold;
- the commissions paid or discounts or concessions allowed to the broker-dealer(s) or underwriter(s), where applicable;
- that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus; and
- other facts material to the transactions.

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Expenses Associated with Registration. We are paying all expenses and fees in connection with the registration of the shares, including reasonable fees of legal counsel of Amplimedical, not to exceed $10,000. The selling stockholder will bear all brokerage or underwriting discounts or commissions paid to broker-dealers or underwriters in connection with the sale of the shares.

EXPERTS

The consolidated financial statements of Nanogen, Inc. appearing in our annual report on Form 10-K for the year ended December 31, 2005 (including the schedule appearing therein) and our management s assessment of the effectiveness of internal control over financial reporting as of December 31, 2005 included, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in its reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements and management s assessment have been incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

The financial statements of Epoch Biosciences, Inc. as of December 31, 2003 and 2002, and for each of the years in the three-year period ended December 31, 2003, incorporated in this registration statement by reference to our current report on Form 8-K filed on December 21, 2004, have been so incorporated by reference herein in reliance on the report of KPMG LLP, independent registered public accounting firm, given on the authority of said firm as experts in accounting and auditing. The report of KPMG LLP covering the December 31, 2003 financial statements refers to the adoption of SFAS No. 142, Goodwill and Other Intangible Assets, effective January 2002.

The consolidated financial statements of SynX Pharma Inc. as of December 31, 2003 and 2002, and for each of the years in the two-year period ended December 31, 2003, incorporated in this registration statement by reference to our current report on Form 8-K/A filed on July 6, 2004, have been so incorporated by reference herein in reliance on the report and the Comments for US Readers on Canada US Reporting Differences of KPMG LLP, chartered accountants, given on the authority of said firm as experts in accounting and auditing.

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LEGAL MATTERS

The validity of the common stock offered by this prospectus has been passed upon for us by Morgan, Lewis & Bockius LLP, San Francisco, California.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission. The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities offered by this prospectus.

We file annual, quarterly and special reports, proxy statements and other information with the Commission. You may read and copy any document we file at the Commission s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the Commission at 1-800-SEC-0330 for further information on the Public Reference Room. Our public filings, including reports, proxy and information statements, are also available on the Commission s web site at http://www.sec.gov.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference into this prospectus the documents listed below, and any future filings (other than the portions thereof deemed to be furnished to the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 prior to the termination of this offering:

- our annual report on Form 10-K for the year ended December 31, 2005, filed with the SEC on March 16, 2006, as amended by a Form 10-K/A, filed with the SEC on March 24, 2006, as further amended by a Form 10-K/A, filed with the SEC on June 27, 2006;
- our quarterly report on Form 10-Q for the quarter ended March 31, 2006, filed with the SEC on May 10, 2006;
- our current report on Form 8-K filed with the SEC on June 16, 2006;
- our current report on Form 8-K filed with the SEC on May 10, 2006;
- our current report on Form 8-K filed with the SEC on May 5, 2006;
- our current report on Form 8-K filed with the SEC on April 25, 2006;
- our current report on Form 8-K filed with the SEC on March 16, 2006;
- our current report on Form 8-K filed with the SEC on February 13, 2006;
- our current report on Form 8-K filed with the SEC on February 8, 2006;

our current report on Form 8-K filed with the SEC on January 23, 2006;

our current report on Form 8-K filed with the SEC on January 18, 2006;

our current report on Form 8-K filed with the SEC on December 21, 2004;

our current report on Form 8-K/A filed with the SEC on July 6, 2004; and

the description of our common stock contained in our registration statement on Form 8-A filed under Section 12(g) of the Securities Exchange Act of 1934 with the SEC on April 7, 1998, including any amendment or reports filed for the purpose of updating such description.

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To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to the registration statement.

We will furnish without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request, a copy of the information that has been incorporated into this prospectus by reference (except exhibits, unless they are specifically incorporated into this prospectus by reference). You should direct any requests for copies to:

Nanogen, Inc.

Attn: General Counsel

10398 Pacific Center Court

San Diego, CA 92121

(858) 410-4600

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PROSPECTUS

2,886,935 Shares

Common Stock

NANOGEN, INC.

The date of this prospectus is June 30, 2006.

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PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

ITEM 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses in connection with the issuance and distribution of the securities registered hereby and the offerings described in this registration statement, other than underwriting discounts and commissions. All amounts are estimated except the SEC registration fee.

SEC registration fee	$ 722.83
Accounting fees and expenses	$ 45,000.00
Legal fees and expenses	$ 20,000.00
Printing expenses	$ 10,000.00
Miscellaneous	$ 1,000.00
Total	$ 76,722.83

ITEM 15. Indemnification of Officers and Directors.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation s board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933. Our restated certificate of incorporation and our amended and restated bylaws provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by Delaware law. In addition, we have entered into indemnification agreements with our officers and directors and have obtained insurance covering our officers and directors against losses.

ITEM 16. Exhibits.

Exhibit No.	Exhibit Title.
2.1	Asset Purchase Agreement dated April 19, 2006, among Registrant, Nanogen Advanced Diagnostics, S.r.L. and Amplimedical S.p.A. Filed as Exhibit 2.1 to Registrant s current report on Form 8-K filed on May 5, 2006 and incorporated herein by reference.
4.1	Specimen Common Stock Certificate. Filed as Exhibit 4.1 to Registrant s registration statement on Form S-1 (File No. 333-42791) and incorporated herein by reference.
4.2	Rights Agreement dated as of November 17, 1998, between Registrant and BankBoston, N.A. Filed as Exhibit 4.2 to the Registrant s registration statement on Form 8-A, filed on November 24, 1998 and incorporated herein by reference.
4.3	Amendment No. 1 to Rights Agreement, dated as of December 11, 2000 between Registrant and FleetBoston, N.A. Filed as Exhibit 10.1 to Registrant s current report on Form 8-K filed on December 12, 2000 and incorporated herein by reference.
4.4	Convertible Promissory Note issued to Amplimedical S.p.A. on May 1, 2006. Filed as Exhibit 4.1 to the Registrant s current report on Form 8-K filed on May 5, 2006 and incorporated herein by reference.
5.1	Opinion of Morgan, Lewis & Bockius LLP as to the legality of the securities. Filed as Exhibit 5.1 to the initial filing of this registration statement.
23.1	Consent of Ernst & Young LLP, independent registered public accounting firm.

23.2 Consent of KPMG LLP, independent registered public accounting firm.

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Exhibit No.	Exhibit Title.
23.3	Consent of KPMG LLP, chartered accountants.
23.4	Consent of Morgan, Lewis & Bockius LLP (included in their opinion filed as Exhibit 5.1).
24.1	Power of Attorney. Filed with the signature page contained in Part II to the initial filing of this registration statement.

ITEM 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(b) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(c) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that (a) and (b) do not apply if the information required to be included in a post-effective amendment by (a) and (b) is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement; and

provided however, that paragraphs (a), (b) and (c) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered in the registration statement, and

the offering of the securities at that time shall be deemed to be the initial bona fide offering thereof.

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(c) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(1) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(2) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in this registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or a prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of this registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in this registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(d) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all the requirements for filings on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the city of San Diego, State of California on June 30, 2006.

NANOGEN, INC.

By: /s/ HOWARD C. BIRNDORF
Howard C. Birndorf

Chairman of the Board and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ HOWARD C. BIRNDORF **Howard C. Birndorf**	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	June 30, 2006
/s/ ROBERT W. SALTMARSH **Robert W. Saltmarsh**	Chief Financial Officer (Principal Financial and Accounting Officer)	June 30, 2006
William G. Gerber, M.D.	Director	
Stelios B. Papadopoulos	Director	
* **David Schreiber**	Director	June 30, 2006
* **Robert E. Whalen**	Director	June 30, 2006

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

Attorney-in-fact

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EXHIBIT LIST

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