

# SECURITIES AND EXCHANGE COMMISSION

## FORM 425

Filing under Securities Act Rule 425 of certain prospectuses and communications in connection with business combination transactions

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### SUBJECT COMPANY

#### **NANOGEN INC**

CIK: **1030339** | IRS No.: **330489621** | State of Incorporation: **DE** | Fiscal Year End: **1231**  
Type: **425** | Act: **34** | File No.: **000-23541** | Film No.: **081048154**  
SIC: **3826** Laboratory analytical instruments

Mailing Address  
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Business Address  
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### FILED BY

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Filed by Nanogen, Inc.  
Pursuant to Rule 425 under the  
Securities Act of 1933 and deemed filed  
pursuant to Rule 14a-12 under the  
Securities Exchange Act of 1934  
Subject Company: Nanogen, Inc.  
Commission File No: 000-23541

# Nanogen-Elitech combined business fact sheet



Nanogen, Inc. (NASDAQ: NGEN), of San Diego, Calif., and privately owned The Elitech Group of Paris, France, have agreed to combine companies to form a single business focused on global sales and distribution of *in vitro* diagnostic products.

**Company name:** The name of the combined Nanogen/Elitech company will be determined later.

**U.S. Headquarters:** San Diego, California

**European Headquarters:** Paris, France

## Management

Chairman: Howard Birndorf, Nanogen founder and current Chairman & CEO

CEO: Pierre Debiais, Elitech founder and current CEO & President

Board of Directors will consist of both Nanogen and Elitech nominated members

The management team will consist of senior management from both companies and will take advantage of the combined strength of the two companies

## Transaction

A reverse acquisition of Nanogen by The Elitech Group

Nanogen will issue shares of Nanogen Common Stock worth 66.5 million for a stock swap with The Elitech Group

The number of shares issued are subject to certain limitations including the trading price of Nanogen stock, the euro-to-U.S. dollar exchange rate and a collar for minimum and maximum ownership percentages

The deal is subject to approval by Nanogen shareholders

Expected close: Q1 2009

### **Company ownership** (anticipated on a fully diluted basis)

Nanogen stockholders: 36.3 percent

Elitech stockholders: 63.7 percent

Ownership ratios are subject to a collar that could result in a +/- 5% variation in ownership percentages

### **Financial Profile**

Combination accelerates revenue growth and profitability

Combined business growing >20% annually

2009 revenues in excess of \$150 million

EBITDA - 10% of revenue

Positive operating cash flow

Substantially accretive to Nanogen 2009 EPS

### **Operations**

Operational synergies are expected in areas of overlapping business functions - e.g., sales, marketing, finance - and will come from gross margin improvement through optimization of manufacturing and distribution. Operational synergies are expected to be identified as management discussions progress

No facilities expected to be closed

Management and employee positions expected to be retained

### **Nanogen at a Glance**

**Business:** Nanogen has a strong product and proprietary technology base in advanced diagnostic solutions for two of the fastest growing *in vitro* diagnostic (IVD) markets - molecular diagnostics and rapid point-of-care testing.

**Headquarters:** San Diego, California

**Publicly traded** on NASDAQ (NGEN)

**Operations:** Bothell, Wash.; Toronto; Milan

**Founded:** 1993, went public in 1998

**Calendar Year 2007:** \$37.3 million revenue

**Calendar Year 2008 (est):** \$49 million revenue

**[www.nanogen.com](http://www.nanogen.com)**

### **The Elitech Group at a Glance**

**Business:** The Elitech Group is the largest independent distributor of *in vitro* diagnostic products in France and operates globally, leveraging products from its own biochemistry and microbiology reagents manufacturing facilities as well as third-party products.

**Headquarters:** Paris, France

**Privately held**

**Worldwide Offices:** France, The Netherlands, United Kingdom, Switzerland, Serbia, United States

**Founded:** 1997

**Calendar Year 2007:** \$70 million revenue; 8% EBITDA

**Calendar Year 2008 (Est):** \$80 million revenue; 9% EBITDA

**[www.elitechgroup.com](http://www.elitechgroup.com)**

## Nanogen-Elitech Compatibility and Synergy

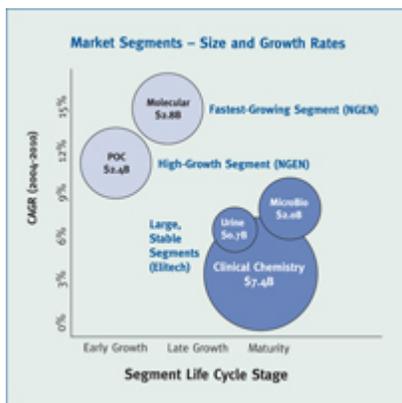
### Complementary Markets

Elitech's presence in mature IVD markets is complemented by Nanogen's proprietary technology and products for the emerging, faster growth industry segments.

Combined business addresses \$37.5B in market opportunity

Both companies target medium and smaller laboratories

Combined, the company will provide customers with a broad product offering of systems and reagents to meet lab testing needs - from rapid cardiac testing in the ER to fully automated clinical chemistry analyzers in the central lab



### Worldwide Market Reach

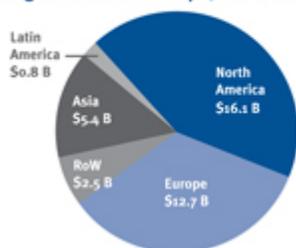
The combined company will focus on expanding sales capacity and market penetration in the U.S. and Europe.

More than 400 employees in 7 countries to support direct sales to labs as well as distribution partners

Existing network of more than 200 distributors offers a broad array of products in emerging markets, including Asia, India, Latin America and Africa

Strong OEM relationships, which will account for approximately 10% of revenue and provide further market coverage and revenue predictability

### Combined sales organizations address largest markets: Europe, North America



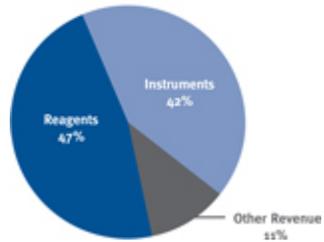
## Balanced Revenue Sources

Product offerings for customers will include a blend of platform systems and instrumentation together with assay test reagents and other consumable supplies.

Resultant revenues stream will provide expanding gross margins that begin at more than 50%, before considering significant operating synergies

Gross margins expected to grow over time as higher-margin reagent products increase as a percentage of revenue

Combined Nanogen-Elitech  
Revenue by Source



August 14, 2008

Nanogen Distribution Partners

Dear All,

Today Nanogen made an exciting announcement - our agreement with The Elitech Group to combine our businesses and form a single, more substantial, IVD company. The agreement to join forces with The Elitech Group creates a company that:

Together will have a much more complete product offering for our customers and partners with products spanning routine clinical chemistry, microbiology, molecular biology and rapid immunodiagnostics.

Will have more substantial revenues and stable financial operations to sustain our business.

Can achieve improved gross margins and profits to reinvest in our product lines and allow us to continue to bring new, innovative, and valued products to the *in vitro* diagnostics markets.

As a partner in our commercial distribution network, I wanted to share this exciting news and communicate directly with you to provide you with more information.

We have created a pro forma Fact Sheet on the combined business which summarizes the basics of the transaction and provides insight to the essential merits of the venture. By combining our business with The Elitech Group we will have financial strength and a broader menu of products to fulfill our mission of enabling better patient care and delivering better, faster diagnostic products to clinicians and physicians worldwide.

We have posted to our website FAQs that may help you and your customers regarding this announcement. We do not expect any short term changes to our business relationships or delivery of product to our customers. We greatly appreciate our relationship with each of you and the support you have provided Nanogen in partnering with us. During the course of the next few months we will be looking at how our larger combined product offering can best be leveraged by our partners. As always, please feel free to call me if you have any questions or thoughts you would like to share.

Kind regards,

A handwritten signature in black ink, appearing to read 'R. Proulx'.

Robert R. Proulx

Vice President Marketing & Sales

**Nanogen, Inc.**  
10398 Pacific Center Court  
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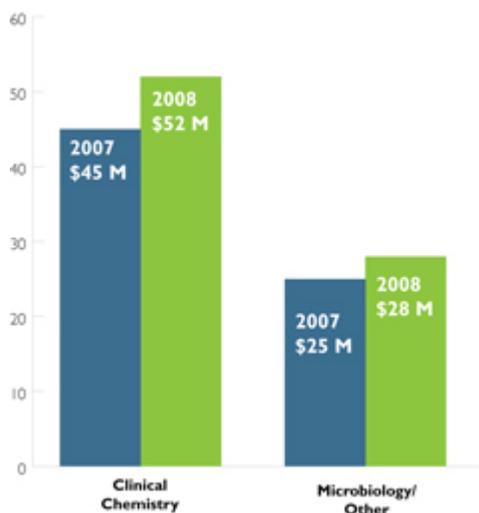
The Elitech Group is the largest independent distributor of *in vitro* diagnostic products in France and operates globally, leveraging products from its own clinical chemistry and microbiology reagents manufacturing facilities as well as third-party products.

As the first French independent distributor in the medical biology market, The Elitech Group offers a wide range of products with 3,000 references for *in vitro* diagnostics in Clinical Chemistry, Haemostasis, Microbiology, Immunology and Electrophoresis.

The Elitech Group also offers a variety of laboratory instruments (clinical chemistry analyzers, haemostasis analyzer, slide stainers, electrophoresis equipment, osmometers, cystic fibrosis test analyzer) sized for routine biology needs as well as for specific requests.

Products manufactured by The Elitech Group are distributed in 90 countries throughout the world.

**REVENUE BREAKDOWN BY SEGMENT**



**THE ELITECH GROUP AT A GLANCE**

**Headquarters:** Paris, France

**Ownership:** Privately held

**Worldwide Offices:** France, The Netherlands, United Kingdom, Switzerland, Serbia, United States

**Founded:** Elitech Group formed 1997

**Calendar Year 2007:** \$70 million revenue; 8% EBITDA

**Calendar Year 2008 (est.):** \$80 million revenue; 9% EBITDA

**Web site:** www.Elitechgroup.com

**The Elitech Group includes:**

**SEPPIM SAS:** reagents manufacturing; Normandy, France

**Vital Scientific BV:** clinical chemistry equipment; Dieren, The Netherlands

**International Microbio:** microbiology manufacturing; Marseilles, France

**Wescor, Inc.:** IVD equipment manufacturer; Logan, Utah

**Key Management**

**Pierre Debiais**

Elitech founder, CEO & President

**Mike Saunders**

Group VP Marketing & Business Development

### Clinical Chemistry Instrumentation and Reagents

The Vital Scientific and SEPPIM divisions of The Elitech Group offer a wide range of solutions for routine clinical biochemistry testing. With more than 5000 instruments systems installed around the world and OEM relationships with Siemens, via both Dade and Bayer, the clinical chemistry instrument and reagent business provides a stable revenue base for the company. Instrumentation ranges from low cost systems to the Vitalab Selectra XL, a fully automated random access analyzer with a throughput of 360 samples per hour. Diagnostic reagents include:

Cholesterol

Triglycerides

Glucose

Electrolytes

Enzyme & Proteins



### Microbiology Instruments and Reagents

Kits and general laboratory equipment for traditional microbiology contribute approximately 20% of The Elitech Group revenue.



*Mycoplasma pneumoniae* kit



*Mycobacterium tuberculosis* kit



Gram slide stainer

The Wescor division has been an industry leader of basic laboratory equipment such as osmometers and cytocentrifuges for many years. It is also the industry leader in Cystic Fibrosis sweat testing.



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Nanogen, Inc. and The Elitech Group, a private French diagnostics company, announced a definitive agreement to combine the two companies. The transaction combines Nanogen's technology leadership in molecular and point-of-care diagnostics with the strong revenue and profit base stemming from The Elitech Group's global manufacturing, sales and distribution of IVD products for the clinical chemistry and microbiology markets.

Combination creates a global *in vitro* diagnostics company with brand identity and a strong financial profile

Initial full year expectations for over \$150 million in revenue, strong EBITDA and positive cash flow

Transaction expected to be substantially accretive to Nanogen 2009 earnings per share

"The combination with Elitech will accelerate the transition of Nanogen into a global, profitable diagnostics company with the critical mass needed to bring our leading molecular and point of care technologies to customers worldwide," said Howard Birndorf, Nanogen's chairman and CEO. "I believe the resulting combination will create value for our shareholders, customers and employees."

"This is a true example of synergy between two companies in the *in vitro* diagnostics industry," commented Pierre Debiais President of Elitech. "We are delighted to be able to combine Nanogen's technology strength with our market reach in the international marketplace and collectively deliver the critical mass required to address the US diagnostic market."

Below please find answers to questions we have anticipated regarding this announcement for both investors and customers. You may also view the press release, individual and combined company fact sheets, and link to the Elitech website using the navigation on the right of the page.

### **Investors' Frequently Asked Questions**

**Question:** How did you arrive at the purchase price, or valuation of Elitech as it relates to multiples of sales, EBITDA, etc. What were the internal benchmarks? Were there other justifications for purchase price and structuring?

**Answer:** The purchase price was determined based on a combination of factors including Elitech's past and projected revenue and EBITDA performance versus comparable companies in the diagnostics industry. An evaluation of the business synergies between Nanogen and Elitech was also taken into consideration. For example, the valuation of \$66.5 million is approximately 1.3 times the last twelve months revenue. Other like companies in this market are valued at 2 to 5 times trailing twelve months revenue.

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**Question:** When did you originally begin discussions with Elitech?

**Answer:** The discussions with Elitech grew out of business discussions that the two companies have had in the past regarding the potential for Elitech to license and/or distribute Nanogen diagnostic products. These discussions led to an appreciation of the mutual benefits that would come from a combination.

**Question:** What is the expected composition of the combined board of directors and management team?

**Answer:** The Board of Directors is expected to have seven members including four from or nominated by Elitech and three from Nanogen. The Chairman is expected to be Howard Birndorf, currently Nanogen's Chairman and CEO, and the CEO & President will be Pierre Debiais, currently Elitech's CEO, who will also be a board member. The management team will include members of both companies current management.

**Question:** How do you plan to fund Nanogen's current cash shortfall? What are the combined company's capital needs going forward?

**Answer:** We anticipate that the combined company will be cash flow positive in the initial year of operations. The share exchange agreement contemplates additional financing for the combined company resulting in an increase of at least \$10 million in working capital. As part of the combination, Elitech and current Nanogen investors have agreed to fund \$8 million for Nanogen's operations between signing and closing.

**Question:** What is the strategic direction of the combined company?

**Answer:** The combined company will continue to pursue the strategy of building an integrated, worldwide *in vitro* diagnostics company to enable better patient care. It will build upon the solid revenue base and cash flow from Elitech's clinical chemistry and microbiology product lines while leveraging the proprietary technology embodied in Nanogen's molecular diagnostics and point of care products to establish a leadership position in the fastest growing segments of the diagnostic industry.

**Question:** Noting Nanogen's microarray discontinuation, is there the potential for other non-core divestitures?

**Answer:** None are anticipated at this time as all current product groups are viewed as core and important to the revenue growth of the combined company.

**Question:** Even though this deal is driven by business synergies rather than financial synergies, are there any areas where you expect to achieve cost savings? What are the plans regarding the integration or consolidation of facilities?

**Answer:** While business synergies are the primary driver behind the combination, financial synergies are very important and will be part of our integration efforts in the first few years. The combined company anticipates significant financial synergies may be realized in three areas. First, there will be some consolidation of functions and headcount in the SG&A, development and manufacturing areas. Second, the stronger combined sales groups will generate increased revenues and improved margins as more products are sold directly to customers versus through lower margin distribution channels. Third, the combined company will realize revenue synergies

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through expanded sales contracts and product offerings to customers. The combined business plan is focused on realizing cost savings and margin improvements as the immediate path to accelerate profitability and cash flow.

**Question:** Will future acquisitions build on the molecular diagnostics platform or could they be in other areas of the business?

**Answer:** Both Nanogen and Elitech have successfully completed and integrated acquisitions. The combined company would expect to continue to look at acquisitions as a path for growth as well as technology and product expansion. The natural focus would be on products for small and medium sized laboratories and would not be limited to any single market focus.

**Question:** What's the strategy for getting Nanogen products into Elitech distribution channels, including overseas? Will Elitech's current distribution network need to change, or be trained, to accommodate Nanogen's POC and molecular diagnostics platforms?

**Answer:** Elitech has a very well established sales and distribution network, including direct sales offices in European countries where Nanogen has growth potential. These sales channels are capable and ready to handle most Nanogen products. The companies will begin to explore distribution opportunities immediately.

**Question:** Does Elitech have any R&D capabilities. If so, what is currently in Elitech's R&D pipeline?

**Answer:** Elitech has strong development capabilities in instrumentation systems and reagent products. There are active development programs underway to renew and expand the clinical chemistry system offerings and also the microbiology system offerings. We are not anticipating making any immediate significant changes to either company's product pipelines.

**Question:** Given Nanogen's historical focus on innovation, how will this acquisition affect the amount and focus of future combined-company R&D spending?

**Answer:** The combined company will continue to focus on meaningful innovation, *i.e.* creating innovative products for clinicians and physician's that improve the management and health of their patients. The combined company will continue to invest in molecular diagnostic products, point of care products and new generations of proprietary platforms for the faster growing markets.

**Question:** Will this acquisition affect Elitech's current strategic OEM relationships with IVD companies?

**Answer:** Elitech has reagent and instrument supply relationships with Siemens and BioMeirieux. These will be unaffected by the combination.

**Question:** What agreements are in place to keep key personnel? How long do they last?

**Answer:** The combined company expects to blend the management capabilities of both entities into a strong management team. The companies plan to develop the organizational and related compensation, retention and incentive plans prior to closing of the transaction.

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**Question:** What is Elitech' s current revenue breakdown?

**Answer:** For the calendar year ended December 31, 2007, Elitech generated \$45 million of revenue in clinical chemistry systems and consumable products and \$25 million of revenue from microbiology systems, consumable products and other miscellaneous products.

**Question:** What is a sustainable revenue and earnings growth rate for the combined business?

**Answer:** In 2008, the combined company expects a 20% growth rate on a pro forma basis. The combined company expects to have 2009 revenues of more than \$150 million and 10% EBITDA.

### **Customers' Frequently Asked Questions**

**Question:** Will there be any changes for Nanogen customers as it relates to the ordering of point of care and molecular diagnostic products from Nanogen? Will this cause a delay or disruption in the receipt of my product orders?

**Answer:** The announcement of our plans to merge with The Elitech Group will have no effect on Nanogen product deliveries. You should continue to place your orders and purchase your Nanogen products from your current Nanogen sales representative or distribution agent. There will be no changes in the near-term to our distribution or delivery capabilities.

**Question:** Will there be any change to Nanogen' s customer service or technical support?

**Answer:** The customer service and technical support teams in San Diego, Bothell or Turin are dedicated to supporting the current Nanogen products and will continue to do so. In addition, San Diego will be the North American Headquarters for the new combined company.

**Question:** Will there be any change to Nanogen' s strategic direction or product development plans?

**Answer:** Both companies share the vision of being a global IVD company, bringing better diagnostic products to the market and enabling better patient care. Nanogen' s point of care and molecular product lines have strong product pipelines and are expected to be an important part of the future growth for the combined company.

**Question:** How will the new combined company benefit me?

**Answer:** By combining forces with The Elitech Group, Nanogen customers will benefit in two key ways. Firstly, Nanogen will be a financially stronger and more stable business with greater resources to fund its operations and bring high quality, innovative products

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to market. Secondly, our combined Marketing and Sales organization will have more products to offer to you, our valued customer; fulfilling our brand promise of delivering improved ways for you to obtain time critical diagnostic results.

# Q2 2008 Fact Sheet

Nanogen (Nasdaq: NGEN) has a strong product and proprietary technology base in advanced diagnostic solutions for two of the fastest growing in vitro diagnostic (IVD) markets—molecular diagnostics and rapid point-of-care testing. The company's technologies provide innovative, high-quality diagnostic products to clinicians and physicians worldwide, making it easier to predict and diagnose diseases, and reduce the time to patient care. The company's products include molecular diagnostic kits and reagents, and kits for rapid, point-of-care testing. Nanogen has pioneered research in areas involving biomedical markers, molecular biology and nanotechnology to bring better results to diagnostics and healthcare.

In late 2007 and early 2008, Nanogen took steps to reduce costs, improve margins, and focus on products and markets with long-term growth prospects to drive future value for the company. Nanogen closed the commercial operations of its array business in November 2007, reducing staff by 20 percent and cutting operating expenses by approximately \$15 million.

## Q2 2008 Updates

Q2 '08 revenues increased 21% to \$12.91M from \$10.7M in same period '07

Partnership with Thermo Fisher to provide products for gene-expression experiments

Point-of-care manufacturing facilities consolidated

Stock listing transferred to the NASDAQ Capital Market

\$10.4M contract from CDC to develop molecular diagnostic assay for flu

## Nanogen at a Glance

**Headquarters:** San Diego, California

**Worldwide Offices:** U.S., Canada, Europe, Middle East

**Founded:** 1993

**Total Rev:** \$37 million (2007)

**Projected Rev:** \$49.6 million (2008)

**Shares Outstanding:** 77 million

**Market Cap:** \$31.6 million (as of Aug. 13, 2008)

**52-wk price range:** \$0.27 - \$1.52

## Key Executives



**Howard C. Birndorf**

Chairman, CEO, Company Founder

**David Ludvigson**

President and Chief Operating Officer

**Nick Venuto**

Chief Financial Officer

**William L. Respass, PhD, JD, SVP**

General Counsel and Secretary

**Graham Lidgard, PhD, SVP**

Research and Development

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## Sources of Revenue

### Diagnostic Products–60 percent

Nanogen' s products are used in multiple segments of the global IVD market, including:

#### Molecular diagnostics / real-time PCR reagents

MGB Alert<sup>®</sup>–detects infectious and respiratory diseases

Q-PCR alert<sup>™</sup> Kits–includes a broad menu for transplant virus testing

#### Point-of-care products

Cardiac STATus<sup>®</sup>–an aid in the diagnosis of acute coronary syndrome (ACS)

STATusFirst<sup>®</sup>–an aid in the diagnosis of congestive heart failure (CHF)

Vyent<sup>™</sup>–first POC NT-proBNP rapid test using whole blood (scheduled for release in mid- to late 2008)

ToxSTATus<sup>™</sup>–test for drugs of abuse

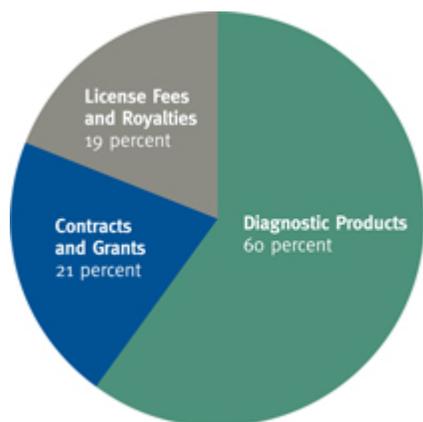
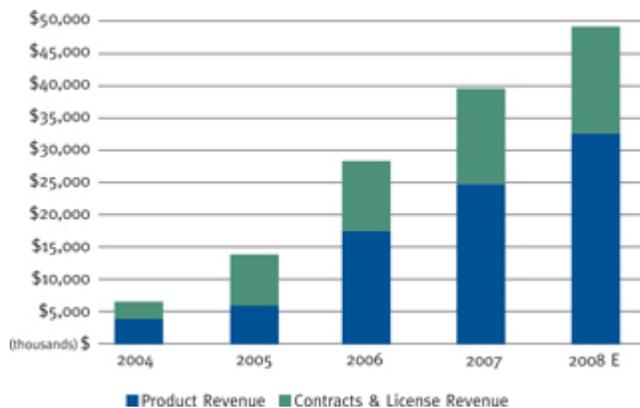
#### Diagnostic readers

DXpress<sup>®</sup> Reader–works in conjunction with StatusFirst<sup>®</sup> CHF test

Diagnostic reader for CDC influenza project

### Contracts and Grants - 21 percent

Nanogen' s contracts include multiple awards from the CDC, enabling work on a third-generation platform with a proprietary format that detects multiple markers for influenza A, B and subtypes. The new platform provides a future vehicle for new, differentiated products for cardiac care and infectious disease rapid POC.



Grants include a \$15 million Grand Challenges in Global Health grant from the Bill & Melinda Gates Foundation to a consortium developing a hand-held diagnostic device for use in remote regions, and a \$2.5 million grant from NIH/NIAID for the development of diagnostics for sepsis and pneumonia.

#### License Fees and Royalties - 19 percent

Nanogen licensing fees are generated via partnerships with Thermo Fisher and others.

#### Notable innovations and IP portfolio

Proprietary MGB probe technologies provide optimal performance and stabilization for DNA probe-target hybridization reactions during real-time PCR testing, enabling the research community to develop novel diagnostics that may not be possible with other chemistries

159 U.S. and 123 foreign patents issued

The Patent Board ranked Nanogen among the biotech industry's most innovative companies, based on science strength ranking—a measurement of the scale, quality, impact, and nearness to core science of a company's patent-based intellectual property. (Wall Street Journal—June 2008)

### ADDITIONAL INFORMATION

*The proposed business combination between Nanogen, Inc. (“Nanogen”) and Elitech Group (the “Business Combination”) will be submitted to the stockholders of Nanogen for their consideration, and Nanogen will file a registration statement, a proxy statement/prospectus and other relevant documents concerning the proposed transaction with the SEC. Shareholders are urged to read the registration statement and the proxy statement/prospectus regarding the proposed Business Combination when it becomes available and*

*any other relevant documents filed with the SEC, as well as any amendments or supplements to those documents, because they will contain important information. You will be able to obtain a free copy of the proxy statement/prospectus, as well as other filings containing information about Nanogen, at the SEC's Internet site (<http://www.sec.gov>). You will also be able to obtain these documents, free of charge, at Nanogen's website (<http://www.nanogen.com>). Copies of the proxy statement/prospectus and the SEC filings that will be incorporated by reference in the proxy statement/prospectus can also be obtained, without charge, by directing a request to: Investor Relations at 858-410-4600 or via email to: [info@nanogen.com](mailto:info@nanogen.com).*

*Nanogen, and its directors and executive officers, may be deemed to be participants in the solicitation of proxies from the stockholders of Nanogen in connection with the proposed Business Combination. Information about the directors and executive officers of Nanogen and their ownership of Nanogen common stock is set forth in the proxy statement, dated May 13, 2008, for Nanogen's annual meeting of stockholders, as filed with the SEC on a Schedule 14, and in Nanogen's annual report on Form 10-K, as amended on Form 10-K/A, filed with the SEC on March 31, 2008 and April 29, 2008, respectively. Additional information regarding the interests of those participants and other persons who may be deemed participants in the proposed Business Combination may be obtained by reading the proxy statement/prospectus regarding the proposed Business Combination when it becomes available. You may obtain free copies of these documents as described in the preceding paragraph.*