

QIAGEN NV  
Form 20-F  
March 31, 2003  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**FORM 20-F**

**REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

**OR**

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

For the fiscal year ended December 31, 2002

**OR**

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 0-28564

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**QIAGEN N.V.**

(exact name of registrant as specified in its charter)

**The Netherlands**

(Jurisdiction of incorporation or organization)

**Spoorstraat 50**

**5911 KJ Venlo**

**The Netherlands**

**011-31-77-320-8400**

(Address of principal executive offices)

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

**None**

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

**Title of class:**

**Common Shares, par value EUR .01 per share**

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**

**None**

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The number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2002 was 145,533,589.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  Yes  No

Indicate by check mark which financial statement item the registrant has elected to follow.  Item 17  Item 18

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Exhibit Index located on sequential page 103.

Unless the context otherwise requires, references herein to the Company or to QIAGEN are to QIAGEN N.V. and its consolidated subsidiaries.

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Our name together with our logo is registered as a trademark in The Netherlands, the United States and a number of other countries: QIAGEN®. Other trademarks registered in the United States include: QIAexpress®, QIAwell®, QIAEX®, QIAprep®, QIAamp®, QIAquick®, Oligotex®, RNeasy®, BIOROBOT®, ENDOFREE®, R.E.A.L.®, PolyFect®, SuperFect®, DNeasy®, EFFECTENE®, UltraFect®, HotStarTaq®, Catrimox®, TurboFilter®, MagAttract®, HiSpeed®, Sensiscript®, DirectPrep®, InhibitEX®, DoubleTag®, ImmunEasy®, QuantiScript®, UltraSens®, Masscode® and ROSYS®. Registered trademarks in countries outside of the United States include: QIA, DyeEx, HiSpeed, Omniscript, Sensiscript, Targetene, TransMessenger, DirectPrep, InhibitEX, DoubleTag, ImmunEasy, QIABRANE, PECURA, QuantiScript, UltraSens, pAlliance, MinElute, ProofTaq, VARISPAN, RNAprotect™, DNAprotect™, LiquiChip™, CryoCell™ and SensiChip™. In 2002, five trademark applications were filed in Germany, Countries of the European Community, Japan and the United States of America for LabelStar™, HiLight™, Ready.Set.Oligo!™, QIAzol™ and QuantiProbe™.

This Annual Report on Form 20-F may also contain trade names or trademarks of companies other than QIAGEN.

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**EXCHANGE RATES**

QIAGEN publishes its financial statements in U.S. dollars. In this Annual Report on Form 20-F, references to dollars or \$ are to U.S. dollars, and references to the euro are to the European Monetary Union euro. Except as otherwise stated herein, all monetary amounts in this Annual Report on Form 20-F have been presented in U.S. dollars.

The exchange rate used for the euro was the noon buying rate of the euro in New York City for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Board of New York. This rate at March 21, 2003, was \$1.0545 per EUR 1.

For information regarding the effects of currency fluctuations on our results, see Item 5 Operating and Financial Review and Prospects.

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Not applicable

**Item 2. Offer Statistics and Expected Timetables**

Not applicable

**Item 3. Key Information**

The selected consolidated financial data below should be read in conjunction with *Operating and Financial Review and Prospects* and the Consolidated Financial Statements, Notes thereto and other financial information included elsewhere in this Annual Report on Form 20-F. The selected consolidated statement of income data for the period ended December 31, 2002 and the consolidated balance sheet data at December 31, 2002 are derived from the Consolidated Financial Statements of QIAGEN which have been audited and reported upon by Ernst & Young LLP, independent auditors, and are included herein. The selected consolidated statement of income data for the fiscal years ended December 31, 2001 and 2000 and the consolidated balance sheet data at December 31, 2001 are derived from the Consolidated Financial Statements of QIAGEN which have been audited and reported upon by Arthur Andersen LLP, independent public accountants, and are included herein. The data presented as of and for the fiscal years ended December 31, 1999 and 1998, and the consolidated balance sheet data as of December 31, 2000, 1999 and 1998, is derived from audited consolidated financial statements not included herein.

**1. Selected Financial Data (amounts in thousands, except per share data)**

*The information below should be read in conjunction with the consolidated financial statements (and notes thereto) and Operating and Financial Review and Prospects.*

| Consolidated Statement of Income Data: | Year Ended December 31, |            |            |            |            |
|--|-------------------------|------------|------------|------------|------------|
|  | 2002                    | 2001       | 2000       | 1999       | 1998       |
| Net sales                              | <b>\$ 298,607</b>       | \$ 263,770 | \$ 216,802 | \$ 158,155 | \$ 120,804 |
| Cost of sales                          | <b>96,508</b>           | 79,673     | 65,436     | 45,836     | 38,141     |

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|  |                  |           |           |           |           |
|--|------------------|-----------|-----------|-----------|-----------|
| Gross profit   | <b>202,099</b>   | 184,097   | 151,366   | 112,319   | 82,663    |
| Operating Expenses:  |                  |           |           |           |           |
| Research and development                                       | <b>28,177</b>    | 26,769    | 23,372    | 17,813    | 13,432    |
| Sales and marketing  | <b>75,086</b>    | 64,830    | 54,931    | 39,948    | 32,744    |
| General and administrative                                     | <b>42,030</b>    | 36,022    | 31,177    | 26,110    | 20,569    |
| Closure and related costs                                      | <b>10,773</b>    |           |           |           |           |
| Acquisition and related costs                                  | <b>1,648</b>     | 3,000     | 5,353     |           |           |
| In-process research and development                            | <b>1,200</b>     |           |           | 5,100     |           |
| Total operating expenses                                       | <b>158,914</b>   | 130,621   | 114,833   | 88,971    | 66,745    |
| Income from operations   | <b>43,185</b>    | 53,476    | 36,533    | 23,348    | 15,918    |
| Other income (expense), net                                    | <b>(4,325)</b>   | 2,847     | 2,591     | 1,640     | 2,885     |
| Income before provision for income taxes and minority interest | <b>38,860</b>    | 56,323    | 39,124    | 24,988    | 18,803    |
| Provision for income taxes                                     | <b>15,723</b>    | 21,896    | 18,085    | 10,950    | 5,489     |
| Minority interest (income) expense                             | <b>(5)</b>       | 8         | 36        | 149       | 148       |
| Net income   | <b>\$ 23,142</b> | \$ 34,419 | \$ 21,003 | \$ 13,889 | \$ 13,166 |
| Basic net income per common share <sup>1</sup>                 | <b>\$ 0.16</b>   | \$ 0.24   | \$ 0.15   | \$ 0.10   | \$ 0.09   |
| Diluted net income per common share <sup>1</sup>               | <b>\$ 0.16</b>   | \$ 0.24   | \$ 0.14   | \$ 0.10   | \$ 0.09   |

<sup>1</sup> Computed on the basis described for net income per common share in Note 4 of the Notes to Consolidated Financial Statements .

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|  |                |         |         |         |         |
|--|----------------|---------|---------|---------|---------|
| Weighted average number of common shares used to compute basic net income per common share   | <b>144,795</b> | 142,962 | 142,040 | 140,317 | 139,716 |
| Weighted average number of common shares used to compute diluted net income per common share | <b>145,787</b> | 145,055 | 145,071 | 142,186 | 141,300 |

| <b>Consolidated Balance Sheet Data:</b>                | <b>December 31,</b> |             |             |             |             |
|--|---------------------|-------------|-------------|-------------|-------------|
|  | <b>2002</b>         | <b>2001</b> | <b>2000</b> | <b>1999</b> | <b>1998</b> |
| Cash and cash equivalents                              | <b>\$ 44,893</b>    | \$ 56,460   | \$ 24,008   | \$ 12,393   | \$ 6,555    |
| Working capital  | <b>\$ 111,554</b>   | \$ 119,448  | \$ 101,527  | \$ 57,275   | \$ 46,235   |
| Total assets   | <b>\$ 454,511</b>   | \$ 356,968  | \$ 240,893  | \$ 154,331  | \$ 110,487  |
| Total long-term liabilities, including current portion | <b>\$ 112,331</b>   | \$ 88,333   | \$ 29,320   | \$ 17,930   | \$ 8,227    |
| Total shareholders' equity                             | <b>\$ 263,031</b>   | \$ 212,975  | \$ 167,356  | \$ 96,872   | \$ 76,230   |
| Common shares  | <b>\$ 1,478</b>     | \$ 1,458    | \$ 1,450    | \$ 1,435    | \$ 2,417    |
| Shares outstanding                                     | <b>145,534</b>      | 143,464     | 142,548     | 140,815     | 139,888     |

**2. Risk Factors**

This Annual Report and the documents incorporated herein by reference contain forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the use of forward-looking terminology such as may, will, could, expect, anticipate, estimate, continue or other similar words. Reference is made in particular to the description of our plans and objectives for future operations, assumptions underlying such plans and objectives, and other forward-looking statements. Such statements are based on management's current expectations and are subject to a number of factors and uncertainties which could cause actual results to differ materially from those described in the forward-looking statements. Factors which could cause such results to differ materially from those described in the forward-looking statements include those set forth in the risk factors below. When considering forward-looking statements, you should keep in mind that the risk factors could cause our actual results to differ significantly from those contained in any forward-looking statement.

**An inability to manage our growth or the expansion of our operations could adversely affect our business**

Our business has grown rapidly, with total net revenues increasing from \$120.8 million in 1998 to \$298.6 million in 2002. We have recently opened our new research and manufacturing facility in Germantown, Maryland and new manufacturing and administration facilities in Germany, upgraded our operating and financial systems and expanded the geographic area of our operations, resulting in the hiring of new employees, as well as increased responsibility for both existing and new management personnel. The rapid expansion of our business and addition of new personnel may place a strain on our management and operational systems. Our future operating results will depend on the ability of our management to continue to implement and improve our research, product development, manufacturing, sales and marketing and customer support programs, enhance our operational and financial control systems, expand, train and manage our employee base, and effectively address new issues related to our growth as they arise. There can be no assurance that we will be able to manage our recent or any future expansion successfully, and any inability to do so could have a material adverse effect on our results of operations.

**We may not achieve the anticipated benefits of acquisitions of technologies and businesses**



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During the past several years we have consummated a number of acquisitions of companies, through which we have gained access to technologies and products that complement our internally developed product lines. In the future, we may acquire additional technologies, products or businesses to expand our existing and planned business. We may not be able to achieve the benefits expected from any potential acquisition in a reasonable time frame, or at all. Acquisitions would expose us to the risks associated with the:

assimilation of new technologies, operations, sites and personnel;

diversion of resources from our existing business and technologies;

inability to generate revenues to offset associated acquisition costs;

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inability to maintain uniform standards, controls, and procedures;

inability to maintain relationships with employees and customers as a result of any integration of new management personnel;

issuance of dilutive equity securities;

incurrence or assumption of debt;

additional expenses associated with future amortization or impairment of acquired intangible assets or potential businesses; or

assumption of liabilities or exposure to claims against acquired entities.

We experienced the loss of certain former employees of QIAGEN Operon, Inc. following our acquisition of Operon Technologies, Inc. in June 2000 and in December 2002 closed the QIAGEN Genomics facility located in Bothell Washington in connection with our effort (acquired in our December 1999 acquisition of Rapigene, Inc.) to shift from offering the genomics services to supporting technology access partners. We have not experienced any problems integrating the technological and business acquisitions we have made. However, our failure to address the above risks successfully in the future could have a material adverse effect on our business.

**Our continued growth is dependent on the development and success of new products**

The market for certain of our products and services is only about fifteen years old. Rapid technological change and frequent new product introductions are typical in this market. Our future success will depend in part on continuous, timely development and introduction of new products that address evolving market requirements. We believe successful new product introductions provide a significant competitive advantage because customers make an investment of time in selecting and learning to use a new product, and are reluctant to switch thereafter. To the extent that we fail to introduce new and innovative products, we may lose market share to our competitors, which will be difficult or impossible to regain. An inability, for technological or other reasons, to develop successfully and introduce new products could reduce our growth rate or otherwise damage our business. In the past, we have experienced, and are likely to experience in the future, delays in the development and introduction of products. We cannot assure you that we will keep pace with the rapid rate of change in life sciences research, or that our new products will adequately meet the requirements of the marketplace or achieve market acceptance. Some of the factors affecting market acceptance of new products include:

availability, quality and price relative to competitive products;

the timing of introduction of the product relative to competitive products;

scientists' opinions of the product's utility;

citation of the product in published research; and

general trends in life sciences research.

The expenses or losses associated with unsuccessful product development activities or lack of market acceptance of our new products could materially adversely affect our business, financial condition and results of operations.

**Our operating results may vary significantly**

Our operating results may vary significantly from quarter to quarter and from year to year, depending on factors such as the level and timing of our customers' research and commercialization efforts, timing of our customers' funding, the timing of our research and development and sales and marketing expenses, the introduction of new products by us or our competitors, competitive conditions, exchange rate fluctuations and general economic conditions. Our expense levels are based in part on our expectations as to future revenues. Consequently, revenues or profits may vary significantly from quarter to quarter or from year to year, and revenues and profits in any interim period will not necessarily be indicative of results in subsequent periods.

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### **We depend on patents and proprietary rights that may fail to protect our business**

Our success will depend to a large extent on our ability to develop proprietary products and technologies and to establish and protect our patent and trademark rights with respect thereto. We currently own 41 issued patents in the United States, 31 issued patents in Germany and 170 issued patents in other major industrialized countries. In addition, we have approximately 201 pending patent applications and we intend to file applications for additional patents as our products and technologies are developed. However, the patent positions of technology-based companies, including QIAGEN, involve complex legal and factual questions and may be uncertain, and the laws governing the scope of patent coverage and the periods of enforceability of patent protection are continuing to evolve. In addition, patent applications in the United States are maintained in secrecy until patents issue, and publication of discoveries in the scientific or patent literature tend to lag behind actual discoveries by several months. Therefore, no assurance can be given that patents will issue from any patent applications owned by or licensed to us or, if patents do issue, that the claims allowed will be sufficiently broad to protect our technology. In addition, no assurance can be given that any issued patents owned by or licensed to us will not be challenged, invalidated or circumvented, or that the rights granted thereunder will provide competitive advantages to us.

The biotechnology industry has been characterized by extensive litigation regarding patents and other intellectual property rights. We are aware that patents have been applied for and/or issued to third parties claiming technologies for the separation and purification of nucleic acids that are closely related to those used by us. From time to time we receive inquiries requesting confirmation that we do not infringe patents of third parties. We endeavor to follow developments in this field, and we do not believe that our technologies and/or products infringe any proprietary rights of third parties. However, there can be no assurance that third parties will not challenge our activities and, if so challenged, that we will prevail. In addition, the patent and proprietary rights of others could require us to alter our products or processes, pay licensing fees or cease certain activities, and there can be no assurance that we will be able to license any technologies that we may require on acceptable terms. In addition, litigation, including proceedings that may be declared by the U.S. Patent and Trademark Office or the International Trade Commission, may be necessary for us to respond to any assertions of infringement, enforce our patent rights and/or determine the scope and validity of our proprietary rights or those of third parties. Litigation could involve substantial cost to us, and there can be no assurance that we would prevail in any such proceedings.

Certain of our products incorporate patents and technologies that are licensed from third parties. These licenses impose various commercialization, sublicensing and other obligations on us. Our failure to comply with these requirements could result in the conversion of the applicable license from being exclusive to non-exclusive in nature or, in some cases, termination of the license.

We also rely on trade secrets and proprietary know-how, which we seek to protect through confidentiality agreements with our employees and consultants. There also can be no assurance that any confidentiality agreements between us and our employees, consultants, outside scientific collaborators and sponsored researchers and other advisors will provide meaningful protection for our trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information. There also can be no assurance that our trade secrets will not otherwise become known or be independently developed by competitors.

We currently engage in, and from time to time may engage in, collaborations including such with academic researchers and institutions. There can be no assurance that under the terms of such collaborations, third parties will not acquire rights in certain inventions developed during the course of the performance of such collaborations.

### **Competition in the Life Sciences market could reduce sales**

Our primary competition stems from traditional separation and purification methods that utilize widely available reagents and other chemicals. The success of our business depends in part on the continued conversion of current users of such traditional methods to our nucleic acid separation and purification technologies and products. There can be no assurance, however, as to how quickly such conversion will occur.

We also experience, and expect to continue to experience, increasing competition in various segments of our nucleic acid-based separation business from companies providing nucleic acid-based separation products in kit form. The markets for certain of our products are very competitive and price sensitive. Other life science research product suppliers have significant financial, operational, sales and marketing resources, and experience in research and development. These and other companies may have developed or could in the future develop new technologies that compete with our products or even render our products obsolete. If a competitor develops superior technology or cost-effective alternatives to our kits and other products, our business, operating results, and financial condition could be materially adversely affected.

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The market for our oligonucleotide products is particularly subject to specific competitive risks. This market is highly price competitive. Our competitors have competed in the past by lowering prices on certain products, and they may do so in the future. In certain cases, we may respond by lowering our prices, which would reduce revenues and profits. Conversely, failure to anticipate and respond to price competition may hurt our market share. We believe that customers in the nucleic acid purification market display a significant amount of loyalty to their initial supplier of a particular product. Therefore, it may be difficult to generate sales to customers who have purchased products from competitors. To the extent we are unable to be the first to develop and supply new products, our competitive position will suffer.

### **Reduction in research and development budgets and government funding may result in reduced sales**

Our customers include researchers at pharmaceutical and biotechnology companies, academic institutions and government and private laboratories. Fluctuations in the research and development budgets of these researchers and their organizations for applications in which our products are used could have a significant effect on the demand for our products. Research and development budgets fluctuate due to changes in available resources, mergers of pharmaceutical and biotechnology companies, spending priorities and institutional budgetary policies. Our business could be seriously damaged by any significant decrease in life sciences research and development expenditures by pharmaceutical and biotechnology companies, academic institutions or government and private laboratories.

In recent years, the pharmaceutical industry has undergone substantial restructuring and consolidation. Additional mergers or corporate consolidations in the pharmaceutical industry could cause us to lose existing customers and potential future customers, which could have a material adverse effect on our business, financial condition and results of operations.

A significant portion of our sales have been to researchers, universities, government laboratories and private foundations whose funding is dependent upon grants from government agencies such as the U.S. National Institutes of Health (NIH) and similar domestic and international agencies. Although the level of research funding has increased during the past several years, we cannot assure you that this trend will continue. Government funding of research and development is subject to the political process, which is inherently fluid and unpredictable. The predictability of our revenues may be adversely affected if our customers delay purchases as a result of uncertainties surrounding the approval of government or industrial budget proposals. Also, government proposals to reduce or eliminate budgetary deficits have sometimes included reduced allocations to the NIH and other government agencies that fund research and development activities. A reduction in government funding for the NIH or other government research agencies could seriously damage our business.

### **Exchange rate fluctuations may adversely affect our business**

Since we currently market our products in over 42 countries throughout the world, a significant portion of our business is conducted in currencies other than the U.S. dollar, our reporting currency. As a result, fluctuations in value relative to the U.S. dollar of the currencies in which we conduct our business have caused and will continue to cause foreign currency transaction gains and losses. Foreign currency transaction gains and losses arising from normal business operations are charged against earnings in the period when incurred. We hedge a portion of the anticipated cash flow that we expect to exchange into other currencies, subject to our short-term financing needs. Due to the number of currencies involved, the variability of currency exposures and the potential volatility of currency exchange rates, we cannot predict the effects of exchange rate fluctuations upon future operating results. While we engage in foreign exchange hedging transactions to manage our foreign currency exposure, there can be no assurance that our hedging strategy will adequately protect our operating results from the effects of future exchange rate fluctuations.

**We heavily rely on air cargo carriers and other overnight logistics services**

Our customers within the scientific research markets typically do not keep a significant inventory of QIAGEN products and consequently require overnight delivery of purchases. As such, we heavily rely on air cargo carriers such as Airborne Express, FedEx and UPS. If overnight services are suspended or delayed and other delivery carriers cannot provide satisfactory services, customers may suspend a significant amount of work requiring nucleic acid purification. If there are no adequate delivery alternatives available, sales levels could be negatively affected.

**We rely on collaborative commercial relationships to develop some of our products**

Our long-term business strategy has included entering into strategic alliances and marketing and distribution arrangements with corporate partners relating to the development, commercialization, marketing and distribution of certain of our existing and potential products. There can be no assurance that we will continue to be able to negotiate

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such collaborative arrangements on acceptable terms, or that any such relationships will be scientifically or commercially successful. In addition, there can be no assurance that we will be able to maintain such relationships or that our collaborative partners will not pursue or develop competing products or technologies, either on their own or in collaboration with others.

**Our ability to accurately forecast our results during each quarter may be negatively impacted by the fact that a substantial percentage of our sales may be recorded in the final weeks or days of the quarter.**

The markets we serve are characterized by a high percentage of purchase orders being received in the final few weeks or even days of each quarter. Although this varies from quarter to quarter, increasingly our customers generally make a large portion of their purchase decisions late in each fiscal quarter, as both their budgets and requirements for the coming quarter become clearer. As a result, even late in each fiscal quarter, we cannot predict with any certainty whether our revenue forecasts for the quarter will be achieved. Historically, we have been able to rely on the overall pattern of customer purchase orders during prior periods to project with reasonable accuracy our anticipated sales for the current or coming quarters. However, if our customers' purchases during a quarter vary from historical patterns, our final quarterly results could deviate significantly from our projections, as was experienced during the second quarter of 2002. Consequently, our revenue forecasts for any given quarter may prove not to have been accurate. We may not have enough information as a result of such patterns to confirm or revise our sales projections during a quarter. If we fail to achieve our forecasted revenues for a particular quarter, our stock price could be adversely affected.

### **Doing business internationally creates certain risks for our business**

Our business involves operations in several countries outside of the United States. Our current consumable and manufacturing facilities are located in Germany, our instrumentation facility is located in Switzerland, and we have synthetic DNA production businesses in Japan and Germany. We also have established sales subsidiaries in Japan, the United Kingdom, France, Switzerland, Australia, Canada, Austria and Italy. In addition, our products are sold through independent distributors serving more than 40 other countries. We began production of certain of our consumable products in the United States at our new facility in Germantown, Maryland in the second quarter of 2002. We operate U.S. facilities in Alameda, California (synthetic DNA production) and Valencia, California (sales). We also operate a research and development and production facility in Oslo, Norway.

Conducting and launching operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. We have invested heavily in computerized information systems in order to manage more efficiently the widely dispersed components of our operations. We use SAP as our business information system to integrate our North American and European subsidiaries. In the past year we made significant investments in and increased utilization of our SAP system with the opening of our state-of-the-art production and distribution facility in Germantown, Maryland (QIAGEN Sciences, Inc.) and by integrating Xeragon, Inc. and the GenoVision group, which were acquired in the second quarter of 2002. We also integrated systems with third party contract manufacturers via SAP and implemented a module to improve field service operations for our Instruments products.

Our operations are also subject to other risks inherent in international business activities, such as general economic conditions in the countries in which we operate, overlap of different tax structures, unexpected changes in regulatory requirements, compliance with a variety of foreign laws and regulations, and longer accounts receivable payment cycles in certain countries. Other risks associated with international operations include import and export licensing requirements, trade restrictions, exchange controls and changes in tariff and freight rates. As a result of the above conditions, an inability to successfully manage our international operations could have a material adverse impact on our operations.



**Our success depends on the continued employment of our key personnel, any of whom we may lose at any time**

Our success depends, to a significant extent, on our Chief Executive Officer and Chief Financial Officer. Although they have entered into employment agreements with us, the loss of these employees could have a material adverse effect on us. Further, although we have not experienced any difficulties attracting or retaining key management and scientific staff, our ability to recruit and retain qualified skilled personnel will also be critical to our success. Due to the intense competition for experienced scientists from numerous pharmaceutical and biotechnology companies and academic and other research institutions, there can be no assurance that we will be able to attract and retain such personnel on acceptable terms. Our planned activities will also require additional personnel, including management, with expertise in areas such as manufacturing and

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marketing, and the development of such expertise by existing management personnel. The inability to recruit such personnel or develop such expertise could have a material adverse impact on our operations.

### **Our business may require substantial additional capital, which we may not be able to obtain on commercially reasonable terms, if at all**

Our future capital requirements and level of expenses will depend upon numerous factors, including the costs associated with:

our marketing, sales and customer support efforts;

our research and development activities;

the expansion of our facilities;

the consummation of possible future acquisitions of technologies, products or businesses;

the demand for our products and services; and

the refinancing of debt.

We currently anticipate that our short-term capital requirements are satisfied by the results of operations. However, we have outstanding loan facilities at December 31, 2002 of approximately \$95.7 million, \$88.4 million of which will become due in July 2005. To the extent that our existing resources are insufficient to fund our activities, we may need to raise funds through public or private financings of debt or equity securities. No assurance can be given that such additional financings will be available or, if available, can be obtained on terms acceptable to us. If adequate funds are not available, we may have to reduce expenditures for research and development, production or marketing, which could have a material adverse effect on our business. To the extent that additional capital is raised through the sale of equity, the issuance of such securities could result in dilution to our shareholders.

### **Changing government regulations may adversely impact our business**

QIAGEN and our customers operate in a highly regulated environment characterized by continuous changes in the governing regulatory framework. Genetic research activities as well as products commonly referred to as "genetically engineered", such as certain food and therapeutic products, are subject to governmental regulation in most developed countries, especially in the major markets for pharmaceutical and diagnostic products (i.e., the European Union, the United States, and Japan). In the recent past, several highly publicized scientific successes (most notably in the areas of genomic research and cloning) have stirred a public debate in which ethical, philosophical and religious arguments have been raised against an unlimited expansion of genetic research and the use of products developed thereby. As a result of this debate, some key countries might increase the existing regulatory barriers; this, in turn, could adversely affect the demand for our products and prevent us from fulfilling our growth expectations. Furthermore, there can be no assurance that any future changes of applicable regulations will not require further expenditures or an alteration, suspension or liquidation of our operations in certain areas, or even in their entirety.

Additionally, we are subject to various laws and regulations generally applicable to businesses in the different jurisdictions in which we operate, including laws and regulations applicable to the handling and disposal of hazardous substances. We do not expect compliance with such laws to have a material effect on our capital expenditures, earnings or competitive position. Although we believe that our procedures for handling and disposing of hazardous materials comply with the standards prescribed by applicable regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, we could be held liable for any damages that result, and any such liability could have a material adverse effect on us.

Sales volumes of certain of our products in development may be dependent on commercial sales by our customers of diagnostic and pharmaceutical products, which will require pre-clinical studies and clinical trials. Such trials will be subject to extensive regulation by governmental authorities in the United States and other countries and could impact customer demand for our products.

**Risk of price controls is a threat to our profitability**

The ability of many of our customers to successfully market their products depends in part on the extent to which reimbursement for the costs of these products is available from governmental health administrations, private

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health insurers and other organizations. Governmental and other third party payers are increasingly seeking to contain health care costs and to reduce the price of medical products and services. Therefore, the biotechnology, diagnostics and pharmaceutical industries are exposed to the potential risk of price controls by these entities. If there are not adequate reimbursement levels, the commercial success of our customers and, hence, of QIAGEN itself, could be adversely affected.

### **Our business exposes us to potential liability**

The marketing and sale of nucleic acid-based products and services for certain applications entail a potential risk of product liability, and there can be no assurance that product liability claims will not be brought against us. Further, there can be no assurance that our products will not be included in unethical, illegal or inappropriate research or applications, which may in turn put us at risk of litigation. We currently carry product liability insurance coverage, which is limited in scope and amount, but which we believe is currently appropriate for our purposes. There can be no assurance, however, that we will be able to maintain such insurance at reasonable cost and on reasonable terms, or that such insurance will in fact be adequate to protect us against any or all potential claims or losses.

### **You may have no effective remedy against Arthur Andersen LLP, our former independent accountants, if a material misstatement or omission is contained in the financial statements that are included in this annual report**

Our consolidated financial statements as of and for each of the two years in the period ended December 31, 2001 were audited by Arthur Andersen LLP. We have not been able to obtain, after reasonable efforts, the written consent of Arthur Andersen to the inclusion of its audit reports in this annual report. Because Arthur Andersen has not so consented, your ability to assert claims against Arthur Andersen may be limited. Therefore, your right of recovery under the federal securities laws may be limited.

### **Provisions of our Articles of Association and Dutch law may make it difficult to replace or remove management and may inhibit or delay a takeover**

Our Articles of Association provide that our shareholders may only suspend or dismiss our managing and supervisory directors against their wishes with a vote of two-thirds of the votes cast representing more than 50 per cent of the outstanding shares. They also provide that if the members of our Supervisory Board and our Management Board have been nominated by the Supervisory Board and Managing Board, shareholders may only overrule this nomination with a vote of two-thirds of the votes cast representing more than 50 percent of the outstanding shares. Certain other provisions of our Articles of Association allow us, under certain circumstances, to prevent a third party from obtaining a majority of the voting control of our shares by issuing preference shares. Pursuant to these provisions (and pursuant to the resolution adopted by our general meeting on June 14, 2002), our Supervisory Board is authorized to issue preference shares if (i) a person has (directly or indirectly) acquired or has expressed a desire to acquire, more than 20 percent of the issued capital of our company, or (ii) a person holding at least a ten percent interest in our Company has been designated as a hostile person by our supervisory board. If the Supervisory Board opposes an intended take-over and authorizes the issuance of preference shares, the bidder may withdraw its bid or enter into negotiations with the Managing Board and/or Supervisory Board and agree on a higher bid price for the Company's shares.

### **Our holding company structure makes us dependent on the operations of our subsidiaries**

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We were incorporated under Dutch law as a public limited liability company and we are organized as a holding company. Currently, our material assets are the outstanding shares of our subsidiaries. We, therefore, are dependent upon payments, dividends and distributions from our subsidiaries for funds to pay our operating and other expenses and to pay future cash dividends or distributions, if any, to holders of the common shares. The lending arrangement entered into by QIAGEN GmbH with a group of banks led by Deutsche Bank in 2001, limits the amount of distributions that can be made to QIAGEN N.V. during the period the borrowings are outstanding. Dividends or distributions by subsidiaries to us in a currency other than the U.S. dollar may result in a loss upon a subsequent conversion or disposition of such foreign currency, including a subsequent conversion into U.S. dollars.

### **Our common shares may have a volatile public trading price**

The market price of the common shares since our initial public offering in June 1996 has increased significantly and been highly volatile. In the past two fiscal years, our stock price has ranged from a high of \$35.38 to a low of \$4.51 on the NASDAQ, and a high of EUR 38.25 to a low of EUR 4.46 on the Neuer Markt. In addition to overall stock market fluctuations, factors which may have a significant impact on the market price of the common shares include:

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

developments in our relationships with collaborative partners;

quarterly variations in our operating results;

changes in government regulations or patent laws;

developments in patent or other proprietary rights;

developments in government spending for life sciences related research;

and general market conditions relating to the pharmaceutical and biotechnology industries.

The stock market has from time to time experienced extreme price and trading volume fluctuations that have particularly affected the market for technology-based companies and that have not necessarily been related to the operating performance of such companies. These broad market fluctuations may adversely affect the market price of our common shares.

### **Holders of our common shares will not receive dividend income**

We have not paid cash dividends since our inception and do not anticipate paying any cash dividends on our common shares for the foreseeable future. Although we do not anticipate paying any cash dividends, any cash dividends paid in a currency other than the U.S. dollar will be subject to the risk of foreign currency transaction losses. Investors should not invest in our common shares if they are seeking dividend income; the only return that may be realized through investing in our common shares is through the appreciation in value of such shares.

### **Shareholders who are United States residents could be subject to unfavorable tax treatment**

QIAGEN may be classified as a passive foreign investment company ( PFIC ) for U.S. federal income tax purposes if certain tests are met. Our treatment as a PFIC could result in a reduction in the after-tax return to the holders of common shares and would likely cause a reduction in the value of such shares. If QIAGEN were determined to be a PFIC for U.S. federal income tax purposes, highly complex rules would apply to our U.S. shareholders. QIAGEN would be considered a PFIC with respect to a U.S. shareholder if for any taxable year in which the U.S. Holder held the Common Shares, either (i) 75% or more of our gross income for the taxable year is passive income; or (ii) the average value of our assets (during the taxable year) which produce or are held for the production of passive income is at least 50% of the average value of all assets for such year. Based on our current income, assets and activities, we do not believe that we are currently a PFIC. No assurances can be made, however, that the IRS will not challenge this position or that we will not subsequently become a PFIC.

**Future sales of our common shares could adversely affect our stock price**

Future sales of substantial amounts of our common shares in the public market, or the perception that such sales may occur, could adversely affect the market price of the common shares. As of December 31, 2002, we had outstanding 145,533,589 common shares plus 11,258,780 outstanding stock options, of which 5,108,991 were exercisable at December 31, 2002. A total of 18,968,000 common shares are reserved for issuance under our stock option plan. All of our outstanding common shares are freely saleable except 12,597,914 shares held by our affiliates, which are subject to certain limitations on resale.

**United States civil liabilities may not be enforceable against us**

We are incorporated under the laws of The Netherlands and substantial portions of our assets are located outside of the United States. In addition, certain members of our Managing and Supervisory Boards, our officers and certain experts named herein reside outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us or such other persons, or to enforce outside the U.S. judgments obtained against such persons in U.S. courts, in any action, including actions predicated upon the civil liability provisions of U.S. securities laws. In addition, it may be difficult for investors to enforce, in original actions brought in courts in jurisdictions located outside the United States, rights predicated upon the U.S. securities laws. There is no treaty between the United States and The Netherlands for the mutual recognition and enforcement of judgments (other than arbitration awards) in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the federal securities laws, would not be directly enforceable in The Netherlands. However, if the party in whose

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favor such final judgment is rendered brings a new suit in a competent court in The Netherlands, such party may submit to the Dutch court the final judgment which has been rendered in the United States. If the Dutch court finds that the jurisdiction of the federal or state court in the United States has been based on grounds which are internationally acceptable and that proper legal procedures have been observed, the Dutch court will, in principle, give binding effect to the final judgment which has been rendered in the United States unless such judgment contravenes Dutch principles of public policy. Based on the foregoing, there can be no assurance that U.S. investors will be able to enforce against us, members of our Managing or Supervisory Boards, officers or certain experts named herein who are residents of The Netherlands or countries other than the United States any judgments obtained in U.S. courts in civil and commercial matters, including judgments under the federal securities laws. In addition, there is doubt as to whether a Dutch court would impose civil liability on us, the members of our Managing or Supervisory Boards, our officers or certain experts named herein in an original action predicated solely upon the federal securities laws of the United States brought in a court of competent jurisdiction in The Netherlands against us or such members, officers or experts, respectively.

## **Risks and Uncertainties Regarding Forward-Looking Statements**

This annual report contains certain forward-looking statements that are subject to certain risks and uncertainties. These statements include statements regarding (i) our ability to maintain relationships with our customers and our broad range of products, (ii) our ability to stay abreast of technological developments, (iii) the size of our markets and potential markets, (iv) our ability to penetrate and expand these markets and the demand for our products, (v) our ability to maintain or increase our production efficiency as a result of expansion in our production capacity, and (vi) our liquidity. Such statements are based on management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the following: risks associated with our expansion of operations, management growth, international operations, and dependence on key personnel; intense competition; the variation in our operating results; technological change; our ability to develop and protect proprietary products and technologies and to enter into collaborative commercial relationships; our ability to integrate acquisitions of technologies and businesses; our future capital requirements; and uncertainties as to the extent of future government regulation of our business. As a result, our future development efforts involve a high degree of risk.

## **Item 4. Information on the Company**

### **History of the Company**

We, QIAGEN N.V., were incorporated on April 29, 1996 as a public limited liability company ( *naamloze vennootschap* ) under Dutch law as a holding company for our wholly owned subsidiaries, and have our legal seat in Venlo, The Netherlands. Our principal executive office is located at Spoorstraat 50, 5911 KJ Venlo, The Netherlands, and its telephone number is +31 77 320 8400. Parties within the United States may also Contact QIAGEN, Inc. in Valencia, California at 800-426-8157 to obtain information. As a holding company, we conduct our business through our subsidiaries located throughout Europe, Japan, Australia, Canada and the United States.

During 2002, we substantially completed three new facilities. The manufacturing facilities at our new research and manufacturing subsidiary, QIAGEN Sciences, Inc., located in Germantown, Maryland, were completed and manufacturing activities began during the second quarter of 2002. The cost to complete the manufacturing facility was \$57.5 million and the project was financed with intercompany loans and long-term debt. A portion of the facility reserved for research activities will be completed at a later date. Construction on two new facilities in Germany (a production building and an administrative building) commenced in October 2000 and was substantially completed in the third quarter of 2002. The total cost to complete these facilities was approximately EUR 55.3 million (approximately \$58.0 million), of which \$57.3 million had been incurred at December 31, 2002 and was financed with long-term bank loans. During 2001, we obtained two new loan facilities allowing borrowings of \$43.5 million and EUR 50.0 million.



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In December 2002, we closed the QIAGEN Genomics facility located in Bothell, Washington and relocated certain activities to our recently opened facilities in Germantown, Maryland and Hilden, Germany. The Bothell site, which was located near Seattle, was originally a facility of Rapigene Inc. which we acquired in December 1999. After the acquisition, the Bothell site focused on providing genotyping services based on the Masscode technology as well as related services. Subsequent to the facility closure, the

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Masscode intellectual property will continue to serve as an important technology base for tagging nucleic acids and proteins. We will also shift our focus from selling the benefits of this technology as a service to supporting our technology access partners who provide such services in the United States and Japan with the products and accessories necessary to ensure ongoing functionality of their SNP genotyping systems. As a result of the closure and related re-focus of this business, we recorded a one-time charge of approximately \$10.8 million consisting of severance and other costs of \$2.7 million, and a non-cash write-off of facilities and equipment and other assets of \$4.7 million and intangible assets, including developed technology and goodwill of \$3.2 million.

On May 28, 2002, we announced that we had entered into an agreement to acquire GenoVision A.S. and subsidiaries, a Norwegian company focused on the development of reagents and solutions using proprietary magnetic bead technologies for certain nucleic acid diagnostic markets, such as the HLA market. We completed this acquisition on June 14, 2002. Subject to the terms of the agreement, we paid \$14.3 million in cash and issued 930,426 shares of our common stock in exchange for all of the outstanding stock of GenoVision. In addition, we agreed to pay a success fee of up to \$3 million based on GenoVision's performance in the twelve months following the acquisition. We believe that this acquisition will provide us with unique, automated solutions for the purification of nucleic acids based on GenoVision's proprietary magnetic particle technology. GenoVision, subsequently renamed QIAGEN A.S., has two wholly owned subsidiaries: GenoVision VertriebsgesmbH, Austria, and GenoVision Inc., Philadelphia, United States. In addition, the company owns a 60 percent share in Particle Solutions A.S., Norway.

On April 17, 2002, we completed the acquisition of Xeragon, Inc. of Huntsville, Alabama, pursuant to an agreement and plan of merger with Xeragon dated as of March 28, 2002. In connection with this acquisition, we issued 561,123 of our common shares to the shareholders of Xeragon in exchange for all of the outstanding capital stock of Xeragon. We structured this acquisition to qualify as a tax-free reorganization. Established in 2001, Xeragon is a market and technology leader for products and services focusing on synthetic nucleic acids, particularly siRNA. Since siRNA products are used in combination with RNA stabilization and purification products, we believe that Xeragon's products will be highly synergistic with our own and will enable us to extend significantly our presence into markets working with siRNA.

On March 31, 2001, we completed the acquisition of the Sawady Group of companies located in Tokyo, Japan in a transaction accounted for as a pooling of interests. Under the terms of the agreement we issued 854,987 shares of our common stock, valued at the time of the closing at approximately \$18.0 million, in exchange for all of the outstanding capital stock of Sawady Technology Co., Ltd., Omgen Co., Ltd. and a majority position of 55 percent in Accord Co., Ltd., the three companies comprising the Sawady Group of companies. The Sawady Group of companies was managed and structured as one organization, but was organized as three companies to meet the tax planning and other preferences of its shareholders. In connection with this merger, we recorded acquisition and related charges of approximately \$3.0 million, which include approximately \$1.0 million of direct transaction costs (primarily legal and other professional fees) and approximately \$2.0 million of expenses primarily relating to the relocation, closure and elimination of leased facilities, such as duplicate field offices. In October 2001, Omgen Co., Ltd. was merged into Sawady Technology Co., Ltd. We believe that the Sawady Group, subsequently renamed QIAGEN Sciences K.K., has built a very strong reputation and position as the second largest supplier of synthetic nucleic acids in Japan. We intend to leverage QIAGEN Operon, Inc.'s technology-leading position in synthetic nucleic acids with the strong market position that the Sawady Group has created in Japan to address this rapidly expanding market. We believe that the worldwide market for synthetic nucleic acid products is growing rapidly.

In January 2001, we purchased the 40 percent ownership of QIAGEN K.K. held by the minority shareholder for JPY 4,000,000 (approximately \$35,000).

On June 30, 2000, we sold our 50 percent equity ownership in Rosys, Inc.

On June 29, 2000, we completed the acquisition of the shares of Operon Technologies, Inc., since renamed QIAGEN Operon, Inc. (Operon), a recognized leader in the area of high-end and added-value synthetic DNA, as well as in the area of tools building on synthetic DNA expertise,

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such as synthetic genes and DNA microarray tools. Operon is located in Alameda, California. The transaction qualified as a tax-free reorganization and was accounted for as a pooling of interests. Operon shareholders received 2,392,432 shares of our common shares (approximately \$104 million at the time of acquisition) for all outstanding shares of Operon stock. Using Operon's leading U.S. technology and market position in high-quality, high-precision, and high-throughput synthetic nucleic acids as well as opportunities for new and powerful joint products, we expect significant expansion into the dynamic areas of today's genomics and genetic analysis markets. QIAGEN Operon GmbH in Cologne, Germany commenced operations in 2001 to provide European customers with the same products offered by Operon in the U.S.

On June 1, 2000, we established a new sales subsidiary, QIAGEN S.p.A., located in Milan, Italy. In February, 2000, we established two new U.S. subsidiaries: QIAGEN North American Holdings, Inc., a company established as a holding company for the U.S. subsidiaries, and QIAGEN Sciences, Inc., our new North American manufacturing and research and development headquarters located in Germantown, Maryland.

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### **Business Overview**

We believe, based on the nature of our products and technologies and on our United States and European market shares as supported by independent market studies, that we are the world's leading provider of innovative enabling technologies and products for the separation and purification of nucleic acids. Since 1986, we have developed and marketed a broad range of proprietary products for the academic and industrial research market. The increased understanding of nucleic acid structure and function combined with the development of technologies such as Polymerase Chain Reaction (PCR), in which DNA base sequences are amplified in order to aid research and development of genetic structures, have resulted in a rapid expansion in the potential uses of nucleic acids beyond the research market into developing commercial markets. These include (1) genomics, (2) nucleic acid-based molecular diagnostics which seek to aid the diagnosis or monitoring of or predisposition for disease, and (3) genetic vaccination and gene therapy which seek to prevent and treat diseases by using nucleic acids themselves as vaccines and drugs. We believe that by targeting our enabling nucleic acid separation and purification technologies to numerous participants in each of these developing commercial markets, we will optimize and diversify our opportunities for growth. We have experienced significant growth in the past, and since January 1, 2000, have had compounded annual growth through December 31, 2002 of approximately 24% in net sales and 19% in net income, after acquisition, in-process research and development and closure and related charges.

Our objective is to expand our leadership position by employing the following strategies: (1) to expand our leadership in the research market and to leverage such leadership to diversify our opportunities for future growth into an array of developing commercial markets, (2) to maintain and further expand technology leadership by investing significant resources in research and development and through strategic acquisitions, (3) to provide a comprehensive portfolio of products for specific nucleic acid handling, separation and purification applications, (4) to increase the utility of our consumable products in certain market segments by providing automation product lines, and (5) to emphasize customer contacts and service.

### **1. Industry Background**

Nucleic acids are the fundamental regulatory molecules of life. They take two basic forms, DNA and RNA, that contain and convey the instructions that govern all cellular activities, including protein manufacture and cell reproduction. DNA and RNA consist of linear strands of nucleotide bases, the sequences of which constitute the genetic information in the cell. The unique genetic blueprint for all living organisms, from bacteria to humans, is encoded in the DNA, which is organized into functional units called genes. In order for a cell to read the genetic blueprint, the information encoded in the DNA must first be copied to RNA, which is then used as the template for protein production. The resulting proteins carry out cellular functions. Any defect or mutation in the sequence of nucleotide bases in the DNA or RNA can disrupt cell or protein function and lead to disease.

Over the past 20 years, a major focus of basic molecular biology research has been to develop a better understanding of the fundamental role of nucleic acids in regulating life at the cellular level. In the 1980's, the biotechnology and pharmaceutical industries used the results of this research to develop therapeutic recombinant proteins such as insulin, interferon, and human growth hormone. Major advances continue to be made in the development of technologies to isolate specific nucleic acids, identify their sequences and structures, and determine their functions. Basic molecular biology research is currently conducted in more than 40,000 academic and commercial laboratories worldwide. An example of a major international initiative in this area is the Human Genome Project with an estimated cost of more than \$3 billion. This project, the first phase of which was completed in 2000, involves several hundred academic, governmental, and industrial research laboratories all working to determine the sequence of the approximately 3 billion nucleotide bases which comprise the human genome, in order to identify the functional genes in the human body. The focus of life science research is now shifting to describing the functions and molecular interactions of the genes identified by sequencing the human genome. The increased understanding of nucleic acid structure and function, coupled with the expanding use of innovative technologies such as PCR, has created significant potential for the use of nucleic acids in a broad array of therapeutic and diagnostic applications.

These new potential applications have resulted in emerging commercial markets for nucleic acid-based technologies and products, including: (1) DNA sequencing and gene-based drug development (genomics), (2) nucleic acid-based molecular diagnostics, and (3) genetic vaccination and gene therapy. *DNA sequencing* determines the specific order of nucleotide bases and is used to identify and understand the regulation and function of genes and their relationship to diseases such as obesity and type II diabetes. This understanding facilitates *gene-based drug development*, a more targeted development of drugs that may have the ability to affect the regulation and function of the genes themselves. *Nucleic acid-based molecular diagnostics* represent a new generation of technologies for the detection of genetic, infectious or other diseases based on their profiles in and impact on nucleic acids. Targeting the unique nucleic acid sequence of disease-causing agents offers significantly greater specificity and sensitivity than current immunoassay approaches. Commercial development in this area has

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increased with the development of amplification technologies such as PCR, which exponentially increase the quantity of the target nucleic acid sequence, enhancing detection. *Genetic vaccination and gene therapy* are applications under development which may eventually lead to the prevention and treatment of diseases by using nucleic acids themselves as vaccines and drugs. In genetic vaccination, diseases such as hepatitis, AIDS, and influenza may be combated using a nucleic acid sequence as the vaccine, instead of using a recombinant protein or an inactivated infectious agent. Medical researchers believe that through gene therapy, diseases such as cancer, diabetes, asthma or coronary artery disease may eventually be cured by replacing disease-causing genes with genes containing the correct DNA sequences.

Molecular biology research and its related developing commercial markets all require pure nucleic acids. These are essential for the reliability and reproducibility of molecular biology experiments in both academic and industrial research laboratories, for the accuracy of results in nucleic acid-based molecular diagnostics, and for the safety of nucleic acid-based vaccines and drugs for human use. Nucleic acids are fragile molecules, which must be rapidly isolated from other cellular components in order to maintain their structural integrity and biological activity, making their separation and purification a complex and sensitive process. Current separation and purification methods can be divided into three basic steps: (1) cell lysis, in which cells are broken open to release the nucleic acids, (2) clearing of the lysate, which involves the removal of insoluble cellular debris from the soluble nucleic acids, and (3) purification, which involves the separation of the target nucleic acids from other soluble contaminants.

There are several traditional methods to perform each of these three steps. Cell lysis can be achieved either mechanically or with chemicals, followed by clearing of the lysate, usually by centrifugation. Purification of the nucleic acids can be performed using various methods, either individually or in combination, depending on the downstream application. The traditional purification methods are phenol extraction, cesium chloride density gradient centrifugation, and precipitation. Of these, *phenol extraction* is the most commonly used. Although this method uses inexpensive materials, it is time consuming and labor intensive, requires considerable technical skill, uses hazardous reagents which are increasingly expensive to dispose of, and produces only medium-purity nucleic acids. *Cesium chloride density gradient centrifugation* is used to prepare large amounts of highly pure DNA. However, this method requires two time consuming rounds of separation (24-48 hours in total) in expensive ultracentrifugation equipment, demands substantial technical skill, and involves the use of hazardous reagents. *Precipitation* is often used to separate nucleic acids from proteins and other contaminants by centrifugation, using chemicals that render either the nucleic acids or the contaminants insoluble. This procedure is fast, inexpensive, and suitable for high-throughput processing, but provides very crude separation and therefore limited purity.

Each of these traditional methods, whether used alone or in combination, has significant limitations. High purity can only be achieved by using hazardous reagents and expensive equipment, while safer and more convenient methods suitable for high-throughput processing typically result in reduced purity.

## **2. Technical Overview of QIAGEN**

### ***Nucleic Acid Separation and Purification Technologies***

We have developed a core set of technologies to provide a comprehensive approach to nucleic acid separation and purification. These technologies can be used alone or in combination to achieve the best solution for a given application. In particular, our proprietary technologies for solid-phase anion-exchange purification and selective adsorption to silica particles or membranes significantly enhance nucleic acid purification, the most difficult, critical, and labor intensive step in nucleic acid isolation. We believe that our technologies represent substantial advances in the speed, reliability, and ease of use of nucleic acid separation and purification procedures and the purity and yield of the resulting nucleic acids.

***Solid-Phase Anion-Exchange Technology.*** Our patented anion-exchange technology was specifically developed for nucleic acid purification. This technology involves selective binding of nucleic acids to a macroporous silica particle coated with a very high density of positively charged anion-exchange groups. Nucleic acids bind tightly to this surface, which allows contaminating substances to be efficiently washed away. After washing, the binding is selectively reversed to release different classes of ultrapure DNA or RNA. We believe that our anion-exchange technology is widely viewed as state-of-the-art for obtaining ultrapure nucleic acids. Our anion-exchange technology also offers the additional benefits of convenience, speed, reproducibility, and high yield. Techniques that require the use of ultrapure nucleic acids include transfection, microinjection, and gene therapy research. Our anion-exchange technology is employed in a number of our products, including QIAGEN® Plasmid Kits, QIAfilter® Plasmid Kits, EndoFree Plasmid Kits, and QIAwell® Plasmid Kits. (See QIAGEN Products below for specific product discussions.)

We also developed a new anion-exchange resin, QIAGEN Anion-Exchange Resin HS, with a higher binding capacity for nucleic acids. This development in conjunction with a new tip design, the QIAprecipitator unit, which

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allows recovery of DNA without centrifugation, and the QIAfilter unit (see *Filtration* below) allows a significantly faster purification procedure. These technologies are used in HiSpeed® Plasmid Kits. We believe that these kits provide the fastest procedure currently available for isolation of large amounts of ultrapure DNA.

***Selective Adsorption to Silica Particles or Membranes.*** Our proprietary silica-gel technology is based on the ability to selectively and efficiently adsorb specific types of nucleic acids to silica-gel particles or membranes in order to separate them from contaminating substances. This technology is particularly suitable for use in molecular biology applications where price, speed, and throughput are more important than ultrapurity, such as DNA minipreparations and DNA cleanup for screening, cloning, and PCR. We employ this technology in a number of our products, including QIAprep®, QIAwell; QIAamp®, QIAquick®, MinElute, QIAEX®, DNeasy®, and RNeasy® Kits. We have also developed silica-coated magnetic beads and new cell lysis chemistries to allow streamlined automated purification of nucleic acids using silica-based technology. This technology is employed in MagAttract® 96 Miniprep Kits and is particularly useful for high-throughput genomics and screening. In October of 1997, Organon Teknika, B.V. granted us a world-wide, non-exclusive license to develop, manufacture, and market products for nucleic acid purification under its *Boom* patents (U.S. 5,234,809, and corresponding patents or applications). The license allows us to sell products including technologies under these patents in all markets and for all applications, with no field-of-use limitations. We believe that the *Boom* patent portfolio covers a simple, rapid, and flexible nucleic acid purification technology which in combination with silica-based and other of our proprietary technologies can create a highly efficient and automatable package for a range of nucleic acid purification applications for research, genomics, and molecular diagnostic purposes.

***Cationic Detergent Technology.*** Cationic detergents stabilize samples, increasing the reliability and potential of nucleic acid-based molecular diagnostics, particularly assays based on RNA, which is highly unstable. Cationic detergent technology also enables efficient purification of nucleic acids and is ideal for a clinical environment since it is non-hazardous. We have acquired issued and pending patents for a novel cationic detergent technology which performs two important functions in DNA and RNA isolation. When added to plasma, blood, or other clinical specimens, it causes cells, viruses, and bacteria to break open and then forms insoluble complexes with the released DNA and RNA. These DNA and RNA complexes are protected from degradation and can be safely transported or stored. The DNA and RNA are easily recovered from these complexes and immediately ready for use in diagnostic and other applications.

***Filtration.*** We have introduced proprietary rapid filtration technology for clearing of the lysate in a single step process that takes just five minutes. The filtered cell lysate containing nucleic acids can then be immediately purified using our anion-exchange or silica-gel membrane technologies. Our filtration technology replaces the time-consuming centrifugation process, which is difficult to automate and does not allow high-throughput sample processing. We employ filtration technology in our QIAfilter, TurboFilter®, and R.E.A.L.<sup>A</sup>® products, which substantially increase productivity in DNA sequencing and nucleic acid-based molecular diagnostics where high-throughput nucleic acid purification is required, as well as in large-scale production of nucleic acids for genetic vaccination and gene therapy. The R.E.A.L. product line was expanded in 2001 with the introduction of a kit that allows automated purification of plasmid DNA in a 384-well format for very high-throughput requirements. Filtration technology is also used in some protein purification products. In October 2001, Pall Corporation, a leader in filtration technologies, and QIAGEN announced an agreement to jointly develop next generation nucleic acid separation and purification products for certain applications in the life science market. The jointly developed products are exclusively marketed by QIAGEN.

***Magnetic Particle Technologies.*** Magnetic particle-based products uniquely combine requirements in the rapidly growing genomics, proteomics and cellomics markets. Certain forms of cell separation and protein separation required in cellomics and proteomics are closely linked with nucleic acid purification, in both research and clinical applications. Therefore, products which link the technologies will offer significant advantages for users in these markets, who will benefit all the more because the products will be optimized to share the same QIAGEN BioRobot® automation platforms. We see magnetic particles as being applicable to certain segments of nucleic acid purification and are therefore already one of many technologies in the broad portfolio of our nucleic acid purification products. In 2002, we expanded our portfolio of magnetic particle-based products with the acquisition of QIAGEN A.S. a successful provider of both robotic workstations and magnetic particle technologies for automated nucleic acid purification.



**Hybrid Capture on Polystyrene Latex Beads.** We have obtained a worldwide (except for Japan) exclusive license for a patented technology for hybrid capture on polystyrene latex beads. Hybrid capture allows isolation of specific nucleic acid sequences directly from a crude biological sample containing a variety of nucleic acids and other contaminants by hybridization to a complementary sequence attached to an insoluble particle. Hybrid capture on polystyrene latex beads is an innovative system which, in comparison to traditional hybrid capture on cellulose, increases both the speed and efficiency of purification of specific nucleic acid sequences. The most typical application for hybrid capture is the isolation of mRNA. We apply this technology in our Oligotex<sup>®</sup> Kits.

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**Endotoxin Removal.** We have developed a proprietary system that incorporates effective endotoxin removal into the purification process. Endotoxins are produced in bacteria and often appear in trace amounts in purified nucleic acids, since they are not effectively removed by most nucleic acid purification systems. Although low-level endotoxin contamination has little or no effect on most molecular biology procedures, even trace amounts can induce toxic reactions in humans. Therefore, nucleic acids for human use must be endotoxin-free. Our selective endotoxin removal technology uses a special reagent system in conjunction with our anion-exchange resin and reduces endotoxin contamination of nucleic acids to a level well below the maximum level allowed by the FDA for use in genetic vaccination and gene therapy. We use this technology in our EndoFree Plasmid Kits and our contract non-cGMP and cGMP DNA production services.

**RNA Stabilization.** We acquired and developed a technology portfolio covering the use of certain cationic detergents for the stabilization and purification of nucleic acids from certain samples. We also acquired a non-exclusive license from AMBION, Inc. for RNeasy<sup>™</sup> technology, which allows stabilization of RNA in animal tissues for reliable gene-expression and gene-profiling analysis. These technologies are used in a product range RNeasy Protect Kits that was launched in 2000. Another product line, RNeasy Protect Bacteria Kits, was released in 2001. RNA stabilization technology is also used in the PAXgene Blood RNA System from PreAnalytiX, a joint venture between BD and QIAGEN that provides integrated and standardized systems for the collection and stabilization of clinical samples together with efficient methods for nucleic acid isolation. The PAXgene Blood RNA System, which is the first PreAnalytiX product line, was launched in 2001. Stabilization of RNA within biological samples is especially important for the molecular diagnostics market and also used in the molecular biology research market.

### **Other Technologies**

**PCR Amplification and Reverse Transcription.** We have obtained an exclusive license for the use of a novel reagent for the optimization of PCR amplification, and have developed a proprietary PCR buffer that increases the robustness of the amplification process and makes it less sensitive to variable factors and contaminants. We acquired a non-exclusive license to sell reagents for PCR to the research market in November 1995. PCR amplification is one of the most widely used techniques in molecular biology research, and is an important technology for the development of the nucleic acid-based molecular diagnostics market. We employ our PCR enhancement technologies in our *Taq* DNA Polymerase, HotStarTaq<sup>®</sup> DNA Polymerase, and Q-solution products. We also offer ProofStart DNA Polymerase for high-fidelity PCR, an application in which highly accurate DNA amplification is required. In 2002, we launched the QIAGEN Multiplex PCR Kit, for fast and efficient multiplex PCR, and the QIAGEN A-addition Kit, for efficient modification of blunt-ended PCR products. To address the needs of researchers transcribing RNA into DNA for PCR analysis, we have developed two recombinant enzymes, Omniscript and Sensiscript<sup>®</sup> Reverse Transcriptases, from a new source. We also introduced the QIAGEN OneStep RT-PCR Kit which combines the reverse transcriptase and HotStarTaq DNA Polymerase enzymes with a novel patent-pending buffer system to provide a complete RT-PCR system. Real-time PCR, a relatively new PCR-based technique that allows quantification of target DNA or RNA species, is becoming more and more widely used in both molecular biology research and clinical diagnostics. To address this rapidly expanding market, in 2001 we launched the first products in an important new line, the QuantiTect SYBR<sup>®</sup> Green PCR and RT-PCR Kit. These kits incorporate HotStarTaq DNA Polymerase, a specifically designed buffer, and in the RT-PCR kit an optimized blend of Omniscript and Sensiscript RT, and can be used with any real-time PCR cyclers for accurate quantification of DNA, cDNA, and RNA targets. In 2002, the QuantiTect line was expanded with the launch of the QuantiTect Probe PCR and RT-PCR Kits, for highly specific and sensitive quantitative PCR and RT-PCR using sequence-specific probes.

**Transfection.** We have obtained exclusive licenses for several patented technologies for high-efficiency transfection of DNA and RNA into cultured eukaryotic cells. Transfection is the process by which foreign nucleic acids are transferred into living cells. The efficiency of the transfection process is heavily dependent upon the purity of the nucleic acid, the nature of the cells, and the type of transfection reagent used, and poor transfection efficiencies can result in weeks of wasted time. The novel activated dendrimer technology licensed to us is employed in our PolyFect<sup>®</sup> and SuperFect<sup>®</sup> Transfection Reagents. Our other two transfection reagents, Effectene<sup>®</sup> and TransMessenger Transfection Reagents, are based on a novel lipid formulation technology licensed exclusively to us. PolyFect, SuperFect, and Effectene Reagents are designed for transfection of different types of cells with DNA, while TransMessenger Reagent, launched in 2001, is the first reagent specifically developed for transfection of cells with RNA. All reagents provide increased transfection efficiency in many cell types compared to traditional transfection methods and decrease the amount of cell death during the transfection process. With these two transfection technologies, we believe we address the needs of researchers transfecting a wide range of cell types with either DNA or RNA.

***Metal Chelate Affinity Chromatography.*** We have obtained an exclusive license for a patented affinity purification system for recombinant proteins, which allows rapid one-step purification of proteins labeled with a

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specific affinity tag. Our proprietary *metal chelate affinity chromatography system* uses a patented high affinity chelating ligand (the NTA ligand), which provides highly efficient purification and detection of specific recombinant proteins carrying a 6xHis affinity tag. These tagged recombinant proteins can be produced using our proprietary expression vectors in bacterial or other expression systems. We believe that the high affinity of our NTA ligand provides significant advantages over other metal chelate systems in terms of purity, speed and convenience. We have developed additional NTA metal chelate affinity systems for color-based detection of 6xHis-tagged recombinant proteins, and for directional immobilization of antigens onto solid surfaces for screening purposes. We employ this technology in our line of QIAexpress® products. In 2001, we expanded our expression (see DNA Cloning, below) and detection systems for tagged recombinant proteins, and introduced a new system for efficient removal of the tag for certain applications. This new system, the TAGzyme System, employs technology obtained from an exclusive license.

**Immunodetection.** The affinity-chromatography based PhosphoProtein Purification System enables a complete separation of biologically active phosphorylated and unphosphorylated protein fractions from cell lysates. This complete separation significantly reduces sample complexity in proteomics and cell signaling studies. PhosphoProtein Antibodies provide highly specific immunodetection of phosphoserine and phosphothreonine residues in blotting procedures.

**Protein Assay.** Luminex® bead-based xMAP technology is now available from QIAGEN as the LiquiChip Protein Suspension Array System. The LiquiChip System can be used for practically any type of interaction assay, including protein-protein, receptor-ligand, and protein-DNA interactions; detection and quantification of biomarkers, such as cytokines, kinases, and immunoglobulins; ELISAs; and DNA hybridizations. The LiquiChip System offers a complete system including instrumentation, beads, detection reagents, ready-to-run kits, accessories, and an unrivalled level of instrument and application support.

**DNA cloning.** We have obtained a license for UA cloning technology, which allows insertion of a PCR product into a plasmid DNA vector for subsequent experiments. DNA cloning is a widely used, routine technique in molecular biology. UA cloning technology offers advantages over other DNA cloning technologies, such as a faster procedure, and is used in the plasmid DNA vectors supplied in the QIAexpress UA Cloning Kit and QIAGEN PCR Cloning Kits. We have also obtained a license for highly competent bacterial cells, which are used as part of the cloning procedure. These cells are provided with QIAGEN PCR Cloning<sup>plus</sup> Kits to further address the needs of researchers performing such experiments. We have additionally obtained a license for, and further developed, a DNA vector that allows expression of proteins in *E. coli*, insect, and mammalian cells, the three most popular systems for protein expression.

**Masscode System.** Through the acquisition of Rapigene, Inc., we acquired the patents to Masscode Cleavable Mass Spectrometry Tag technology. This is the first new DNA tagging technology since the discovery of four-color fluorescence. Unlike fluorescence, which is limited to 4-8 analyses at a time, Masscode tags are capable of providing hundreds of simultaneous measurements. In the field of genomic analysis, use of Masscode technology coupled with a standard single-quadrupole mass spectrometer allows over 40,000 measurements to be made per day per instrument. This technology provides highly reliable, reproducible, and cost-efficient SNP genotyping, at what we believe to be an unmatched speed and quality. In addition, we have built a range of enabling technologies that can create further powerful packages in combination with certain of our products. These include innovative, enabling technologies that increase the efficiency of handling of nucleic acid microarrays, also known as biochips, and technologies that dramatically improve and control the hybridization reactions incorporated in many types of DNA assays including biochips. Following the December 2002 closure of the QIAGEN Genomics facility in Bothell, Washington, the Masscode intellectual property will continue to serve as an important technology base for tagging nucleic acids and proteins. We will also shift our focus from selling the benefits of this technology as a service to supporting our technology access partners in the United States and Japan with the products and accessories necessary to ensure ongoing functionality of their SNP genotyping systems.

**Synthetic DNA and RNA.** Through the acquisition of California-based Operon Technologies, Inc. in June, 2000, we acquired a technology platform for massive parallel, high-throughput DNA synthesis, which offers significant advantages for primer and probe synthesis as well as longer synthetic nucleic acids of up to 100 bases that can be used for construction of synthetic DNA genes, full-length genes, or enhanced DNA microarray tools. Based on a better binding affinity, QIAGEN Operon's high-throughput synthesis technology platform allows the manufacture of synthetic nucleic acids at unparalleled speed, cost, and quality. A second production site in Germany commenced operations in

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2001. The acquisition of Xeragon Inc. in April 2002 added to QIAGEN Operon's leadership position in synthetic nucleic acid products. Xeragon holds leading market and technology positions for products and services focusing on synthetic RNA and small interfering RNA (siRNA) in particular. siRNA molecules are double stranded RNA, approximately 21-25 nucleotides in length, which function as key molecules in triggering sequence specific mRNA

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degradation, leading to the posttranscriptional silencing of a target gene. siRNA technology is considered one of the most powerful tools to unravel function of genes and can be used in a variety of applications such as high throughput target validation and gene therapy. The significance of this new technology is creating a high degree of excitement throughout the scientific community. It addresses one of the most dynamic areas of today's functional genomics market. The ability to down-regulate the expression of genes in mammalian cells simply, effectively, and specifically holds enormous scientific, commercial, and therapeutic potential. In October 2002, we launched the Cancer siRNA Oligo Set, the first set of disease-specific siRNAs for the life sciences market.

***Resonance Light Scattering.*** Licensed from Genicon Sciences Inc., RLS Technology is an ultra-sensitive signal generation, multi-application platform and detection technology for the simple and efficient detection, measurement and analysis of biological interactions. By using these proprietary nano-sized particle labels that specifically bind to targeted molecules, minimal sample amounts of targeted nucleic acids can be measured by simple, low cost white light source-based instrumentation. The ultra-high sensitivity of RLS Technology allows researchers to access novel biological information and avoid time-consuming, expensive and information-distorting amplification procedures such as PCR. This technology is used in the highly sensitive HiLight Array System, which was launched in 2002.

***Planar Waveguide (PWG) Technology.*** QIAGEN licensed this technology from Zeptosens AG, which allows the use of minimal sample amounts for analysis of the differential expression pattern of genes that are expressed at very low levels. Its extremely high sensitivity allows users to avoid cumbersome, expensive, and information-distorting amplification procedures such as PCR. In 2002, we launched the SensiChip DNA Array System, which provides complete microarray analysis without amplification steps, to give true gene expression profiles. In May 2002, we announced a collaboration with Axxima Pharmaceuticals AG, under which both parties will jointly develop oligonucleotide probes to identify differentially regulated protein kinases and phosphatases. The content will be optimized for use of the SensiChip platform. We will distribute these in the form of oligonucleotide sets or SensiChip microrarrays to our customers. The nucleic acid sequence data will be jointly developed through use of our SensiChip products and based on Axxima's proprietary know-how on all human protein kinases and phosphatases.

### **3. QIAGEN's Products**

We offer over 300 products, which include a broad range of consumables as well as instruments and services, for a variety of applications in the separation, purification, and subsequent use of nucleic acids. These products enable our customers to efficiently pursue their research and commercial goals that require the use of nucleic acids. Major applications for our consumable products are plasmid DNA purification; RNA stabilization and purification; nucleic acid transfection; genomic and viral nucleic acid purification (principally for PCR); PCR amplification; reverse transcription; DNA cleanup after PCR and sequencing; and DNA cloning. We offer most of these products in kit form to maximize customer convenience and reduce user error. These kits contain our proprietary disposable separation and purification devices and/or other proprietary technologies, all necessary reagents and buffers, and a technical handbook that includes a detailed protocol and background information. Each kit includes devices and reagents for a number of preparations ranging from one to one thousand. Each kit is covered by our quality guarantee. Our BioRobot Systems perform automated nucleic acid preparation and reaction set-up, allowing customers to perform reliable high-throughput nucleic acid sample preparation and other laboratory tasks. We also offer custom services, including SNP genotyping and analysis, DNA sequencing, and non-cGMP and cGMP DNA production on a contract basis. In addition, we offer specialized products for protein expression, purification, detection, and analysis, as well as for immunization for production of antibodies. These products complement our nucleic acid separation and purification technologies and products.

#### ***Consumable Nucleic Acid Separation and Purification Products***

We offer a wide range of consumable nucleic acid separation and purification products based on our platform of proprietary technologies. These are targeted to a number of nucleic acid purification applications and markets as described below.

**Plasmid DNA Purification.** Plasmid DNA purification is the most common and basic technique in molecular biology, encompassing a wide range of quality, throughput, and pricing requirements. Plasmid DNA is a small circular piece of bacterial DNA capable of moving from one cell to another. This property, together with an ability to acquire new pieces of genetic information (recombination), makes plasmid DNA a basic tool for cloning, sequencing, transfection, and many other molecular biology applications.

We offer a wide range of products for plasmid DNA purification, each tailored to the needs of a specific application. For convenient, large-scale preparation of ultrapure plasmid DNA, we offer QIAGEN, QIAfilter, and

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EndoFree Plasmid Kits, which are based on our proprietary anion-exchange, filtration, and endotoxin removal technologies. In 2000, we introduced the first HiSpeed Plasmid Kit, which has a newly developed anion-exchange resin and tip design as well as QIAfilter technology for clearing cell lysates and new QIAprecipitator technology for recovering DNA without the need for centrifugation, making the purification procedure significantly faster. Kits for purification of ultrapure plasmid DNA are used in the molecular biology research, DNA sequencing, and genetic vaccination and gene therapy research markets, and range in price from \$163 to \$1,430 per kit. We believe that future applications for these products will be large-scale plasmid purification for the commercial genetic vaccination research and gene therapy research markets.

We offer a comprehensive range of products for plasmid DNA minipreps (purification of small amounts of DNA). QIAwell Plasmid Kits, based on our anion-exchange and filtration technologies, are available in 8-well and 96-well formats for high-throughput minipreps of ultrapure plasmid DNA for transfection, sequencing, and other sensitive molecular biology applications. QIAprep Miniprep Kits, based on our proprietary silica-gel membrane and filtration technologies, are available in single column, 8-well, and 96-well formats for low- to high-throughput minipreps of high-purity plasmid DNA for standard molecular biology applications such as sequencing, cloning, and PCR. R.E.A.L. Prep 96 and *micro*R.E.A.L.<sup>™</sup> Prep 384 Plasmid Kits use our filtration technology to provide fast and economical minipreps for very high-throughput screening and DNA sequencing projects. The MagAttract 96 Miniprep System, released in 2001 and based on our proprietary silica, cell lysis, and magnetic bead technologies, allows fully automated, high-throughput plasmid DNA purification for high-throughput genomics and screening applications. Our miniprep products range in price from \$63 to \$3,400 per kit. We believe that applications for these products will expand with the development of molecular biology research, DNA sequencing, and genomics markets.

***Genomic and Viral Nucleic Acid Purification.*** Reliable clinical diagnostics and genetic analysis require reproducible preparation of genomic and viral nucleic acids as the templates for the PCR amplification process that frequently precedes a diagnostic procedure. For purification of these nucleic acids from starting materials such as blood, tissue, body fluids, and stool, we offer a comprehensive range of QIAamp Kits, which use our silica-gel membrane technology and proprietary cell lysis procedures. These products are available in both single column and 96-well formats and are used in the molecular biology and molecular diagnostic research markets. They range in price from \$98 to \$2,162 per kit. In addition, two new systems were launched for this market in 2002. One of these is the PAXgene DNA System from PreAnalytiX, a joint venture between Beckton, Dickinson and Company and QIAGEN. The PAXgene DNA System is an integrated and standardized system for collection and stabilization of whole blood samples and isolation of their genomic DNA. The other is the FlexiGene DNA System, which provides a rapid method for purification of DNA from variable volumes of whole blood, buffy coat, and cultured cells in a convenient single-tube format. We believe that future applications of these products for PCR template purification will expand significantly with the commercialization of the nucleic acid-based molecular diagnostics market and will include gene-based drug development.

***RNA Stabilization and Purification.*** RNA purification requires rapid and efficient removal of contaminants that can destroy fragile RNA molecules. For rapid RNA purification, we offer the RNeasy product line, which uses its silica-gel membrane technology in both single column and 96-well formats. For specific purification of mRNA, we offer Oligotex Kits based on our proprietary technology for hybrid capture on polystyrene latex beads. These products are used in the molecular biology and molecular diagnostic research markets and range in price from \$94 to \$1,000 per kit.

In 2000 we introduced the first in a series of planned products that allow stabilization of RNA within biological samples, which is especially important for the molecular diagnostics market. RNA becomes extremely unstable once a biological sample is harvested, as expression of some genes is induced by the collection (leading to more RNA for those genes) and other RNA species become degraded after collection. Immediate stabilization of the RNA and preservation of the RNA expression pattern is therefore a prerequisite for accurate gene-expression analysis. RNeasy Protect Kits, launched in 2000, combine RNeasy and RNA*later* technologies. The latter technology, for which we acquired a non-exclusive license from AMBION, Inc., allows stabilization of RNA in animal tissues for reliable gene-expression and gene-profiling analysis. RNA*later* RNA Stabilization Reagent is also available as a separate product for sample stabilization, and can be used in conjunction with all RNA purification kits available. In 2001, we introduced a product line that allows stabilization of RNA in bacterial cells – RNeasy Protect Bacteria Kits. These products are used in the molecular biology and molecular diagnostic research markets and range in price from \$49 to \$994 per kit. In 2002, we introduced the Rneasy 96 BioRobot 8000 Kit, which combines proven Rneasy silica-gel-membrane technology with walkaway automation on the BioRobot 8000. PreAnalytiX, a joint venture between BD and QIAGEN that provides integrated and standardized systems for the collection and stabilization of clinical samples together with efficient methods for nucleic acid isolation, released its first product line in 2001 – the PAXgene Blood RNA System. Blood samples are collected in PAXgene Blood RNA Tubes, in which they can be stored or



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transported at room temperature without RNA degradation or gene induction, and RNA is isolated from the sample using a standardized procedure. This system is particularly relevant to the pharmaceutical industry and the clinical research

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market, and kits are priced between \$160 and \$600. We believe that applications for our RNA stabilization and purification products will expand significantly as the molecular diagnostics market adopts nucleic acid-based testing.

***DNA Cleanup.*** DNA cleanup products are used to remove reagents and contaminants, such as primers, nucleotides, and enzymes, from DNA fragments amplified by PCR or modified by other enzymatic reactions before they are used in cloning, sequencing, microarray analysis, or other downstream applications. We offer a range of QIAquick and QIAEX Kits in single column, 8-well, and 96-well formats for specific cleanup applications. In 2000, we launched a new range of cleanup kits, MinElute Kits, which use a new spin-column design, which we developed, to allow elution of DNA fragments in a much lower volume than previously possible. MinElute, QIAquick, and QIAEX Kits are based on our silica-gel technology and are used in the molecular biology research, DNA sequencing, and molecular diagnostic research markets. These kits range in price from \$82 to \$600 per kit. We also offer DyeEx Kits available in single column and 96-well formats for cleanup of sequencing samples prior to analysis. These kits are used in the molecular biology research and DNA sequencing markets, and range in price from \$115 to \$1,450 per kit. In 2002, we launched the LabelStar Array System, for efficient labeling and cleanup of cDNA before array hybridization. The optimized reaction conditions in this system result in high signal intensity, low background, and the identification of more true positives at low expression levels. We believe that applications for our DNA cleanup products will expand as the microarray, DNA sequencing and molecular diagnostics markets continue to develop.

### ***Consumable Enzymes and Reagents***

***PCR and RT Enzymes and Reagents.*** PCR and reverse transcription (RT), and RT-PCR have become widely used tools for amplification of nucleic acids in molecular biology, making nucleic acids easier to detect. As a result, a profitable market segment has developed for companies licensed to sell products covered by PCR-related patents. In November 1995, we acquired a non-exclusive license from Hoffmann-La Roche for the use, production, and sale of enzymes and reagents required for PCR in the research market. This license allows us to market kits that include our existing products for pre-PCR sample preparation and post-PCR DNA cleanup bundled with PCR enzymes and reagents. We believe we are well situated to penetrate the rapidly growing PCR research market by capitalizing on our leadership position in sample preparation and our reputation for innovative and high quality products. The PCR license therefore allows us to offer customers in the research market a fully integrated solution to their nucleic acid purification and amplification needs. We launched our first two PCR products in November 1996 and have followed this with a range of additional kits for standard and specialized PCR applications, including the launch in 2001 of a new high-fidelity DNA polymerase that allows highly accurate DNA amplification. Our PCR products range in price from \$92 to \$1,739 per kit. We have also entered the reverse transcription (RT) market. RT is the process by which RNA is transcribed into DNA for subsequent analysis, most frequently PCR analysis. We offer a line of enzymes and kits for RT and RT-PCR, including a one-step RT-PCR kit launched in 2000, which range in price from \$44 to \$651 per kit. Real-time PCR, a PCR-based technique that allows quantification of target DNA or RNA species, is becoming more and more widely used in both molecular biology research and clinical diagnostics. To address this field, in 2001 we launched the QuantiTect SYBR Green System, which incorporates our PCR and RT enzymes and reagents. This system can be used with any real-time PCR cyclers for accurate quantification of DNA, cDNA, and RNA targets, and is an important new line that addresses a rapidly expanding market. In 2002, we launched the QuantiTect Probe System, which provides highly specific and quantitative PCR and RT-PCR using sequence-specific probes. QuantiTect Kits range in price from \$330 to \$655. We believe there is significant potential for these products in molecular biology research and molecular diagnostics markets. In November 2002, Epoch Biosciences, Inc. and QIAGEN announced that QIAGEN will become a co-exclusive worldwide sales and marketing partner to the research field for products that incorporate Epoch Biosciences' MGB Eclipse(TM) Probe Systems for real-time measurement of gene expression. Epoch will exclusively supply components to QIAGEN and QIAGEN will offer custom and catalogue probe systems as part of our gene expression product offerings for sale to researchers in the life sciences industry and to pharmaceutical companies conducting internal research. Under terms of the agreement, QIAGEN received a non-exclusive license to the component technologies, and Epoch will receive undisclosed technology access fees and royalties on sales of catalogue products by QIAGEN. The companies expect to offer the first QIAGEN branded products in early 2003.

***DNA Cloning.*** Cloning of DNA into plasmids is a routine and basic molecular biology method. As described above, plasmids are small circular pieces of bacterial DNA into which new pieces of DNA can be introduced, a technique called cloning. In 2001, we introduced new products that use UA-cloning technology for fast and easy insertion of a PCR product into a plasmid DNA. These products extend the range of products that we offer to researchers performing PCR, and are priced between \$62 and \$572.

***DNA Transfection Reagents.*** We identified a product opportunity in the transfection of plasmid DNA into mammalian cells, which is currently the major application for ultrapure plasmid DNA purified with our products. We obtained exclusive licenses for several innovative reagents for efficient transfection, and offer a range of reagents that address specific market needs. We currently offer three reagents for transfection of DNA, priced in the range of

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\$107 to \$749 per kit, with bulk quantities of each reagent also available for high-throughput applications. In 2001, we launched the first transfection reagent specifically designed for transfection of cells with RNA. This reagent provides researchers with new possibilities for transfection experiments, and is priced at \$147. TransMessenger Transfection Reagent also offers efficient transfection of siRNA in the rapidly expanding field of gene silencing by RNA interference. QIAGEN Transfection Reagents can be bundled with our existing plasmid and RNA purification products and siRNA oligos for molecular biology and gene therapy research markets.

### ***Instrumentation***

Both academic and industrial research laboratories are actively seeking automation of routine procedures to free scientists and technicians for more sophisticated tasks, eliminate human error, and increase reproducibility when processing samples from a diverse range of sources. This demand for the reliability automation provides is fueled by increased automation needs in molecular biology research, the functional genomics market, genome projects, gene-based drug development, nucleic acid-based molecular diagnostics, and the stringent requirements of the latest assay technologies, all of which require large numbers of standardized nucleic acid sample preparations and enzymatic reactions. In response to this market demand, we offer the BioRobot product line. In August 1999, we introduced the QIAGEN BioRobot 3000, a bench-top workstation designed to automate routine liquid-handling tasks as well as nucleic acid and protein purification, complete with pre-programmed software for automation of many QIAGEN purification procedures, such as QIAwell, QIAprep, R.E.A.L., and QIAquick. The BioRobot 3000 offers a completely flexible approach to automation, with each instrument being tailor-made to the individual laboratory's application needs. The BioRobot 3000 is used in molecular biology research, molecular diagnostic research, DNA sequencing, and genomics markets. Since the BioRobot 3000 is a custom instrument, the price depends on which components are installed and which base model is selected. The base prices, without any added components, are \$42,200 for the 4-probe 96 cm system, \$47,500 for the 4-probe 120 cm system and \$58,300 for the 4-probe 200 cm system. The BioRobot RapidPlate, which is fully integratable with BioRobot workstations and can be directly integrated with the BioRobot 3000 extended arm systems, was introduced in 2001 for fast liquid handling in 96- and 384-well formats, and is priced at \$43,000. In 2002, the BioRobot Twister™ Robotic Arm Systems were introduced. These provide flexible transfer and temporary storage of microplates, deep-well blocks, and other labware within integrated BioRobot systems, allowing extended hands-free processing.

In 2000, we introduced the BioRobot 8000. The BioRobot 8000 allows high-throughput, walk-away purification of nucleic acids. The fully automated capability is provided by new technologies, such as an automated vacuum system, automated identification and tracking of buffer bottles, and a fast and accurate liquid and robotic handling system. The BioRobot 8000 is designed for routine handling of 384-well formats, and is used by laboratories at the leading edge of genomics and other molecular biology fields. The list price for a BioRobot 8000 is \$99,000.

In 2002, three new BioRobot Systems were launched to address the requirements of new market segments in the fields of gene expression analysis, protein characterization, and genomic sequencing. Each system has a specialized worktable layout and includes a Specialist Pack containing all the purification chemistries, software protocols, worktable accessories, and service support agreements required for a specific application.

Also in 2002, we introduced the BioRobot MDx, which provides walkaway automation of sample preparation for applications in clinical laboratories. The workstation uses automated vacuum processing to eliminate centrifugation steps, allowing faster sample processing. It uses standardized processing and proven QIAamp chemistries for reliable results, and generates full process documentation and sample tracking, allowing effortless data management. The list price for a BioRobot MDx is \$170,000. The BioRobot 9604, which was launched in 1998, also targets nucleic acid sample preparation and handling tasks in molecular diagnostics laboratories, blood banks, and forensic projects. Nucleic acid samples purified on the BioRobot 9604 are ready for use in the demanding and sensitive downstream assays performed in molecular diagnostic, pharmaceutical, and research applications. The current list price of the BioRobot 9604 is \$92,900-\$101,200.

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Through the acquisition of GenoVision A.S., QIAGEN initiated selling the BioRobot M and GenoM series of instrumentation products. Both systems automate the use of magnetic particle-based consumables, an expertise that was greatly expanded through the acquisition of GenoVision.

Many BioRobots use QIAsoft software, which provides user-friendly point-and-click control. New software and hardware upgrades are continuously being developed to improve the speed and performance of the BioRobot series and to expand the range of potential applications.

The BioRobot product line gives us a strategic opportunity to establish a large base of installed instrumentation, thereby promoting recurring sales of our consumable products. Each installed instrument generates additional annual consumable sales of approximately \$22,000 to \$60,000. Most QIAGEN technologies are available

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in BioRobot-compatible formats. New kits were introduced in 2002, based on filtration technology and magnetic particle technology. We believe future markets for these instruments will include the molecular diagnostic and functional genomics markets.

In addition to the BioRobot Product line, we also offer OEM customers liquid handling instrumentation products that are not coupled with nucleic acid purification. This allows us to spread the cost of designing and manufacturing the instrumentation products over a larger unit volume.

Instrumentation products account for less than 15 percent of our total consolidated net sales. Consumables used on instruments are estimated to account for less than 10 percent of consolidated net sales.

### ***Contract Services***

We offer contract services for non-cGMP DNA production, SNP analysis services, and DNA sequencing as additional ways to market our products, and to expand and promote our technologies. All services are provided with full project consultation and support from experienced technical staff.

***Plasmid DNA Contract Manufacturing Service.*** Most customers who require the ultrapure DNA provided by our products are usually not equipped to produce it in the large amounts necessary for their pre-clinical and clinical studies. We offer these customers contract DNA production under non-cGMP conditions and, using our proprietary technology for ultrapure DNA purification and endotoxin removal, suitable for all preclinical research as well as for preclinical studies in gene therapy and genetic vaccination.

cGMP-grade plasmid DNA is required by the FDA and other regulatory agencies for any application involving use in humans. We joined an alliance with Valentis Inc. and DSM Biologics in 1999 to further strengthen what is considered the world's leading consortium for manufacturing and supplying customers with contract manufacturing of ultrapure, stable DNA plasmids and formulated cGMP-grade DNA at any scale, from preclinical toxicology studies to commercial products. This alliance provides a quality and scale of cGMP-grade plasmid DNA production that we believe is unsurpassed by any other supplier. Customers may include pharmaceutical or biotech companies or academic institutions working in the gene therapy and genetic vaccination fields. We share in revenues and profits from this alliance. Valentis Inc. (resulting from the merger of Megabios Corp. and GeneMedicine, Inc.) is a leader in the field of gene medicines. Valentis develops proprietary gene delivery systems and applies its preclinical and early clinical development expertise to create gene-based products. DSM Biologics, a unit of DSM Fine Chemicals, is a leading development and manufacturing company of intermediates and active pharmaceutical ingredients for the pharmaceutical industry.

***SNP analysis and DNA sequencing services.*** Through the acquisition of Rapigene, Inc., we offer high-throughput single nucleotide polymorphism (SNP) genotyping, SNP validation services, and products based on the Masscode technology. This proprietary technology represents a new dimension in screening of genetic variations (SNPs) between individuals. Masscode technology is the first new DNA tagging technology since the discovery of four-color fluorescence. Unlike fluorescence, which is limited to 4-8 analyses at a time, Masscode tags are capable of providing hundreds of simultaneous measurements. In the field of genomic analysis, use of Masscode technology coupled with a standard single-quadrupole mass spectrometer allows over 40,000 measurements to be made per day per instrument. This technology provides highly reliable, reproducible, and cost-efficient SNP genotyping, at what we believe to be an unmatched speed and quality. Furthermore, this technology platform has tremendous headroom for next generation developments. The technology is validated and currently offered world-wide as a service to leading pharmaceutical, agricultural, and genomics companies, as well as to academic centers. We also offer SNP discovery, DNA isolation, and DNA quantification services. Following the December 2002 closure of the QIAGEN Genomics facility in Bothell, Washington, the Masscode intellectual property will continue to serve as an important technology base for tagging nucleic acids and proteins.

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We will also shift our focus from selling the benefits of this technology as a service to supporting our technology access partners in the United States and Japan with the products and accessories necessary to ensure ongoing functionality of their SNP genotyping systems.

We offer a Genomic DNA Isolation Service for purification of high-quality DNA that is suitable for all genomic and molecular biology applications as well as for archiving. Versatile QIAamp and DNeasy Systems allow isolation of genomic DNA from a variety of sources (e.g., blood, body fluids, and animal and plant tissue) at scales ranging from just a few micrograms to several milligrams of genomic DNA.

We also offer medium to high-throughput DNA sequencing services which are performed in Europe and Japan, which use our proprietary DNA purification and automation technologies as well as state-of-the-art, high-throughput, automated sequencing technologies. The capacity in the fourth quarter 2002 was 500 Mb of raw data per year. We have already contributed to several commercial and public large-scale DNA sequencing projects, including

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several eukaryotic, viral, and bacterial genome projects, as well as the full-length human cDNA project. We also provide a bioinformatics system, ConSequence, for analysis of DNA sequences.

Our contract services, which account for less than 5 percent of total consolidated net sales, are currently provided to the molecular biology and genomics research market for genetic vaccination, gene therapy, pre-clinical trials, SNP genotyping, and DNA sequencing. We expect future markets for these services to be expanded to include molecular diagnostics and genomics.

### ***Oligonucleotide Synthesis, Microarray Products, and Custom Gene Synthesis***

QIAGEN Operon (QIAGEN Operon, Inc. and QIAGEN Operon GmbH) is a recognized leader in the area of high-end and added-value synthetic DNA. Operon provides custom DNA synthesis of oligonucleotides using a revolutionary high-throughput synthesis platform. A large number of oligonucleotide-modification options are available. QIAGEN Operon also provides a range of arrayable oligonucleotide sets (Array-Ready Oligo Sets) for the genome of several species, including human, yeast (*Saccharomyces cerevisiae*), tuberculosis (*Mycobacterium tuberculosis*), malaria (*Plasmodium falciparum*), mouse, rat, arabidopsis (*Arabidopsis thaliana*), *Caenorhabditis elegans*, *Candida albicans*, *Drosophila melanogaster*, *Escherichia coli*, and *Haemophilus influenzae*. These sets represent the genomes of either clinically relevant or widely used model organisms. QIAGEN Operon can also provide custom arrays of oligonucleotides or other DNA fragments. QIAGEN Operon additionally provides a custom gene synthesis service for the manufacturing of genes for pharmaceutical and biotechnology applications as well as a range of stock oligonucleotide products.

QIAGEN Operon's leading U.S. technology and market position in high-quality, high-precision, and high-throughput synthetic nucleic acids, as well as opportunities for new and powerful joint products, is expected to allow significant expansion into the dynamic areas of today's genomics and genetic analysis markets.

### ***siRNA Synthesis***

We are a licensed supplier of short interfering RNA (siRNA), and offer both a custom siRNA synthesis service and a range of stock library products directed against common target genes. siRNAs have been shown to function as key molecules in triggering targeted gene silencing, and this technology is considered the most powerful tool to unravel the function of genes. siRNA synthesis is performed using our proprietary TOM chemistry, which enables the production of high-quality RNA leading to efficient gene silencing. We also provide an online tool for the design of siRNA sequences. The design tool uses state-of-the-art design criteria to enable gene silencing potential to be maximized. In October 2002, we launched the Cancer siRNA Oligo Set, the first set of disease-specific siRNAs for the life sciences market. This set is comprised of two siRNAs for each of 139 cancer-related genes, which are recognized as clinically and scientifically relevant. Every siRNA was designed using state-of-the-art design criteria to maximize gene-silencing potential, and was synthesized using our patented TOM-amidite chemistry to yield high-quality, high-purity RNA oligonucleotides. Our siRNA products combine with our RNA transfection technologies to provide a fully integrated solution for gene silencing.

### ***Recombinant Protein Purification Products***

Purification of recombinant proteins is a necessary step in most molecular biology research projects, and is therefore performed by most of our customer base. We offer our customers QIAexpress products, which use a unique purification technology based on metal chelate affinity



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chromatography on Ni-NTA resin for one-step purification of recombinant proteins. The *QIAexpress* line also includes products for protein expression and a proprietary protein detection system based on metal chelate affinity technology and mouse monoclonal antibodies that recognize the 6xHis-tag epitope. In 2002, Ni-NTA Superflow Columns were introduced, which provide automated, large-scale protein purification. Several products were introduced in 2001, including new vectors for expression of recombinant proteins as well as new antibodies for their detection, and a new system for cleaving the tag (used in the purification technology) from recombinant proteins for specialized applications. *QIAexpress* products are used in the molecular biology and molecular diagnostic research markets, and cost between \$76 and \$3,369. We believe that applications for these products will expand with growth in the genomics and proteomics markets.

### ***HLA and Tissue Typing Products***

QIAGEN AS provides innovative products for HLA/tissue typing and has exclusive worldwide marketing rights to the OLERUP SSP product line for gene-based tissue typing. The OLERUP SSP product line provides a comprehensive product portfolio for the HLA market for the molecular typing of all class I and class II HLA alleles. QIAGEN has developed the Haplotype Specific Extraction technology, which was introduced in October 2002 for HLA applications. This allows for the preparation of haploid DNA from naturally diploid DNA at targeted areas of the

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genome where heterozygosity yields an ambiguous genotype. This is expected to improve the analysis results in instances where ambiguities occur. The concept is bead based and can be run on the GenoM-6 instrument.

### **4. Product Development**

Our product development efforts are focused on expanding our existing products and developing innovative new products in selected areas where we have expertise and have identified substantial unmet market needs. A Vice President of Research & Development oversees the global research and development activities in Germany, Switzerland, Norway and the U.S. Our research and development organization is matrix structured, which allows us flexibility to refocus our product development efforts as new technologies or markets emerge. The total number of research and development employees at December 31, 2002 was 279. Our total research and development expenses in 2002 were approximately \$28.2 million. We have focused our product development efforts in the following key areas:

#### ***Research Market and Genomics***

We intend to maintain our technology leadership position through investments in product improvements, product extensions, and innovative new approaches. Recent examples of our efforts include the introduction of a new range of products, BioMag suspensions, using magnetic particles for the isolation of RNA and genomic DNA for blood, tissue and cell culture. Additionally, we developed products for reverse transcription (RT)-PCR, amplification of RNA, stabilization of RNA in biological samples, and high-speed isolation of plasmid DNA, as well as automated protocols for DNA and RNA isolation from clinical samples using our QIAamp and RNeasy technologies.

We believe that improvements in its instrumentation will strengthen our leadership position in the automation of nucleic acid-based applications and generate an increased demand for our consumable products.

We expanded our portfolio of magnetic particle-based products in 2002 with the acquisition of GenoVision A.S. a successful provider of both robotic workstations and magnetic particle technologies for automated nucleic acid purification. GenoVision A.S. (now known as QIAGEN A.S.) focuses on automated purification of nucleic acids from a wide range of clinically relevant samples using MagAttract magnetic particle technology in combination with BioRobot M- and EZ-Instruments.

In 2002, we entered into supply agreements with Precision Systems Science Co., Ltd. (PSS). Under the terms of the agreements, we intend to purchase automation components, some of which will be available exclusively to us, for our automated nucleic acid, protein and cell purification solutions. During 2003, we intend to introduce certain next generation magnetic particle solutions based on automation components from PSS for the low and medium-throughput market segments.

In 2002, QIAGEN and Zymark Corporation continued to strengthen a strategic alliance addressing a range of flexible automated platforms for seamlessly integrated samples and liquid handling. The alliance will focus on uses of such instrumentation for nucleic acid handling and purification, dilution, and assay setup.

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As the genomics and drug discovery market expands, there is an increased need for efficient methods to prepare and analyze samples. As this market is often defined by the request for integrated solutions, we have leveraged our nucleic acid handling, extraction and purification expertise by entering into a number of transactions and agreements.

In 2002, we introduced our first products from our collaboration with Genicon Inc. and continued to develop further products for use with the technologies accessible through this alliance. We exclusively distribute products for single-color detection on self-spotted microarrays, incorporating Genicon's RLS (Resonance Light Scattering) Technology, an ultra-sensitive signal generation, multi-application platform and detection technology. During the fourth quarter of 2002, we introduced the QIAGEN HiLight System, which uses RLS instead of fluorescence for detection. The intense signals produced by the HiLight System enable simple and highly sensitive detection of nucleic acids without the need for amplification steps. The HiLight System is part of our complete range of products for highly sensitive and reliable microarray applications.

In an agreement with Kreatech Biotechnology B.V., we were granted an exclusive license to KREATECH's ULS<sup>®</sup> labeling technologies and products in combination with our resonance light scattering ( RLS ) products licensed from Genicon Sciences. In addition, we acquired non-exclusive rights to develop and sell ULS<sup>®</sup> products for labeling and detecting nucleic acids as well as proteins in microarray applications for the life science research markets. The LabelStar Array System, introduced in the third quarter of 2002, is designed for efficient labeling and cleanup of cDNA before array hybridization. Optimized reaction conditions result in high signal intensity, low background, and the identification of more true positives at low expression levels. The LabelStar System combines an easy-to-use system with a highly flexible labeling technique, choice of label, and amounts of RNA.

We entered into an agreement in 2001 with Pall Corporation to jointly develop next generation nucleic acid separation and purification products for certain applications in the life science market. We will exclusively market the

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jointly developed products. The first suite of products will focus on products combining certain of Pall's filtration technologies with certain of QIAGEN's technologies for applications in medium-, high-, and ultra-high throughput separation and purification of certain types of nucleic acids widely analyzed in genomics applications. In 2002, we introduced, as part of the first suite of products, the MinElute 96 UF PCR Purification Kit for high-throughput purification of PCR products for microarray analysis and sequencing. We and Pall Corporation believe that the entire suite of products, which will also be optimized for use on our leading automation solutions, will allow us to further increase our expanding leadership in these market segments.

In November 2000, we entered into a strategic alliance with Luminex LabMAP™ Detection Technology to develop a broad range of consumable kits and assays for basic research and drug discovery applications based on Luminex's proprietary LabMAP™ technology. We will distribute these new assay detection products as a complementation of our nucleic acid consumable kits and assays for the research and biopharmaceutical community, especially in the field of genomics-driven assay development and drug discovery. We launched our first line of reagents and assay kits based on the Luminex technology in 2002.

In January 2000, we announced that we had entered into a worldwide, multi-year collaborative agreement with Zeptosens AG to develop integrated, multi-analyte detection systems for applications in areas including functional genomics, toxicology, and pharmacogenomics. The alliance intends to build on the powerful combination of Zeptosens' proprietary and innovative planar waveguide (PWG) platform detection technology, Zeptosens' surface chemistry and assay architecture know-how, and our proprietary instrumentation and consumable technologies for nucleic acid handling, purification, and preparation. In 2002, we launched the SensiChip DNA Array System, a complete microarray solution including reader, customized arrays of optimized 70mer oligos, hybridization station, plus image acquisition and analysis software.

We have also entered into an agreement with Affymetrix to develop and commercialize products for sample handling and nucleic acid preparation for RNA based expression profiling experiments performed on Affymetrix GeneChip® arrays. The agreement expands on the general recommendation that Affymetrix has been making for the use of certain QIAGEN products in expression monitoring protocols provided to Affymetrix GeneChip array customers. In 2002, the GeneChip Sample Cleanup Kit was launched, which is used to prepare target samples for gene expression analysis with GeneChip arrays. Affymetrix GeneChip technology is currently used by researchers to acquire, interpret, and manage complex genetic information from applications including sequence analysis, genotyping, and gene expression monitoring.

Through these collaborations, we are aiming to develop seamlessly integrated, broad-end technology platforms, which will provide complete nucleic acid analysis solutions to customers in high-throughput genomics markets.

In 2002, we maintained our leadership in the area of oligonucleotide synthesis. In addition to our state-of-the-art facility in Alameda, California, we opened a second synthesis facility in Germantown, Maryland. This provides synthesis services to the biotech-rich community of the north-eastern United States. A local facility offers faster turnaround time, which should improve overall customer satisfaction and result in increased market share of the oligonucleotide market. In Europe, sales from the synthesis facility in Cologne, Germany doubled in 2002. The integration of the Sawady Group, acquired in 2001, was completed in 2002 with the installation and validation of our unique high-volume synthesis capability, as in our other three oligonucleotide manufacturing sites. We are a leading supplier with production capabilities in North America, Europe, and Japan and are in prime position to address the worldwide need for high-quality products and services.

In 2002 we applied our unique competitive advantage of massive parallel high-throughput synthesis to produce off-the-shelf Array-Ready Oligo Sets. Array-Ready Oligo Sets are sets of oligonucleotides that can be used as probes for thousands of genes in a particular genome. The probes were designed from data in publicly available genome databases and their sequences were optimized using the search program Basic Local Alignment Search Tool (BLAST). Customers use the sets to print their own microarrays for gene expression and drug discovery studies. By the end of 2002, we offered seventeen Array-Ready Oligo Sets and subsets. We have plans to double the number of array-ready products offered in 2003. With our ability to synthesize large numbers of oligos, we are uniquely positioned to address this rapidly growing market, and are able to

provide new and updated oligo sets faster than other suppliers.

***Genetic Vaccination and Gene Therapy***

The commercialization of gene therapy and genetic vaccination for human use will require significant quantities of ultrapure DNA, which must be endotoxin-free in order to comply with FDA and other regulatory requirements. In response to this need, we are developing new resins and modifying our existing purification

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technology to allow for a significant improvement in the efficiency of production of very large amounts of ultrapure cGMP-grade DNA.

In 2002 the pAlliance, a strategic alliance between QIAGEN and several leading contract manufacturing organizations, continued to extend its leading position as a contract manufacturer for plasmid DNA. pAlliance announced agreements for manufacturing of clinical samples for DNA vaccines and pharmaceuticals serving clients from the biopharmaceutical and pharmaceutical industry in North America, Europe and Japan. The pAlliance members believe that this agreement represents one of the largest agreements for pAlliance since the alliance was initiated in early 1999 and started supplying contract-manufacturing services for DNA-based therapeutics and vaccines to what is a significant group of customers in the pharmaceutical and biotech industries. A new lysis protocol was developed and patented in 2002, which allows a faster and more robust lysis in large volumes.

We believe that genetic vaccination will be a commercial market before gene therapy. We are working with leading researchers using QIAGEN-purified DNA to test the feasibility of genetic vaccination in veterinary applications.

### ***Nucleic Acid-Based Molecular Diagnostics***

The development of nucleic acid-based molecular diagnostics depends on the availability of nucleic acid purification technologies that can provide high-throughput sample processing without cross-contamination or carryover between samples. We are developing modifications to our existing QIAamp product line to increase throughput further, to reduce cross-contamination and carryover, and to expand automation possibilities for genomic and viral nucleic acid purification. We also have dedicated research capacities applying technologies including cationic detergents in the field of stabilization and purification of nucleic acids.

In May 2002, we entered into a development, manufacturing, and supply agreement with Roche Molecular Systems, Inc. (RMS), a business area of Roche Diagnostics and Roche Diagnostics Corporation (RDC), the US sales and marketing arm of Roche Diagnostics, which aims to develop and distribute a customized integrated diagnostic system for the preparation, detection, and quantification of nucleic acids from the hepatitis B, hepatitis C, and human immunodeficiency (HIV-1) viruses. The system will use automated sample preparation modules from QIAGEN for nucleic acid purification, based on the BioRobot MDx, and are known as the TaqPrep. Following nucleic acid purification, samples will be transferred to Roche's COBAS® TaqMan® platform for amplification and detection, which uses real-time PCR to amplify and detect infectious agents.

In 2002, QIAGEN and Leica Microsystems AG announced a Development and Co-Marketing Agreement, in which our products and technologies will be used with Leica's systems for laser microdissection. Under the terms of the agreement, we will develop protocols and products for handling and purification of nucleic acids that are optimized for use in combination with laser microdissection and in analyses of microdissected material. Leica will optimize its systems for use with our products, and we will promote these products to Leica's customers.

In 1999 we formed PreAnalytiX, a joint venture with Becton, Dickinson and Company (BD) to develop, manufacture, and market integrated systems for collecting, stabilizing, and purifying nucleic acids for molecular diagnostic testing. The venture combines BD's leadership in sample collection and QIAGEN's leadership in nucleic acid stabilization and purification. We believe that the synergy between BD and QIAGEN will enable PreAnalytiX to develop unique preanalytical solutions that will benefit the entire molecular diagnostics industry. PreAnalytiX launched its first product (RNA stabilization in blood samples) in April 2001. In August 2002, PreAnalytiX announced that they successfully formed agreements with pharmaceutical companies including GlaxoSmithKline for the use of the PreAnalytiX system. In October 2002, the PAXgene Blood DNA System, an integrated and standardized system for collection and stabilization of whole blood specimens and isolation of their genomic DNA, as well as various protocols integrating collection and stabilization and purification products were introduced.

## 5. Principal Markets

From our inception, we have believed that nucleic acids would play an increasingly important role in molecular biology and that major new commercial uses of nucleic acids would be developed. We have been supplying researchers with proprietary products for the separation and purification of nucleic acids since 1986. Customers include major academic institutions and governmental laboratories such as the United States National Institutes of Health (NIH), as well as leading pharmaceutical and biotechnology companies. In addition, fundamental developments in recent years have created significant new opportunities for us in the emerging markets of genomics, nucleic acid-based molecular diagnostics, and genetic vaccination and gene therapy. In response to these opportunities, we are currently targeting our products and marketing activities to each of these markets.

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### ***Research Market***

The worldwide research market for nucleic acid separation and purification products is comprised of an estimated 40,000 academic and industrial research laboratories with more than 150,000 researchers from leading academic institutes, biotechnology companies and pharmaceutical companies. Subsegments of this market include the research markets for DNA sequencing, nucleic acid-based molecular diagnostics, and genetic vaccination and gene therapy. A substantial portion of this market continues to utilize traditional, labor intensive methods for nucleic acid separation and purification, and we estimate that 30 percent of all molecular biology research time is spent on such processes. We recognized early on the opportunity to replace the traditional methods with reliable, fast, and high-quality nucleic acid separation and purification technologies and products. We concentrated our product development and marketing efforts on this market and now offer over 300 nucleic acid separation and purification products to customers. We also offer innovative protein expression and purification products. We believe that we are the technology leader in this growing research market and that we are well positioned to increase sales and expand our share of the research market as laboratories continue to convert from traditional methods to our products. Based on estimates of the number of sample preparations being performed each year, we believe that the current worldwide research market for our nucleic acid purification products exceeds \$750 million. In addition, we believe that an additional \$270 million is spent annually in this market on PCR enzymes and reagents. We have expanded our product base for PCR amplification and reverse transcription and continue to develop products for the PCR-related market segment.

### ***Genomics Market***

We believe the genomics market offers a significant growth opportunity for our consumable and instrumentation products. This developing market is characterized by its need for large numbers of ultrapure nucleic acid samples as well as for efficient protein expression and purification for functional analysis. We believe that the combination of our DNA sample preparation products with BioRobot automation systems gives us a strong competitive position in this market.

In April 2002, we acquired Xeragon, Inc., a market and technology leader for products and services focusing on synthetic RNA and small interfering RNA (siRNA) in particular. The acquisition of Xeragon adds to QIAGEN Operon's leadership position in synthetic nucleic acid products. siRNA molecules are double stranded RNA, approximately 21-25 nucleotides in length, which function as key molecules in triggering sequence specific mRNA degradation, leading to the posttranscriptional silencing of a target gene. siRNA technology is considered the most powerful tool to unravel the function of genes and can be used in a variety of applications such as high throughput target validation and gene therapy. Xeragon offers custom and pre-manufactured stock siRNA products. QIAGEN and Xeragon believe that these RNA synthesis technologies can soon be integrated into QIAGEN Operon's leading massive parallel, high-throughput DNA synthesis platforms.

In June 2000, we acquired Operon Technologies Inc. (now QIAGEN Operon, Inc.), a technical leader in the area of high-end and added-value synthetic DNA, as well as in the area of tools building on synthetic DNA expertise, such as synthetic genes and DNA microarray tools. Synthetic nucleic acids have become one of the fastest growing areas of nucleic acid research, with applications in genomics and molecular diagnostics. These market segments use enabling technologies and methods, such as DNA sequencing, gene chips and DNA microarrays, SNP analysis, synthetic genes, and labeled probes for detection, all of which rely on availability of synthetic nucleic acids. Synthetic nucleic acids are used in the analysis of nucleic acids purified from natural sources, and therefore are highly synergistic with our products and technologies for nucleic acid separation, purification, and handling as both product offerings address to a very significant extent the same customers.

Participants in the genomics market include academic research laboratories, numerous major biotechnology and pharmaceutical companies, which have research, and/or gene-based drug development programs, as well as smaller companies with genomics and other DNA



sequencing-related businesses. We believe that the functional analysis, which is performed following the discovery of the functional genes, adds a significant, high value market opportunity that is larger than the market for our products in the gene discovery phase.

***Nucleic Acid-Based Molecular Diagnostics Market***

We believe that the molecular diagnostics market represents a significant but largely untapped market for nucleic acid separation and purification products. We believe that the advent of PCR and other amplification technologies has made the prospect of nucleic acid-based molecular diagnostics feasible. Nucleic acid-based molecular diagnostics have fundamental advantages over traditional immunoassay diagnostics in both specificity and sensitivity. This new generation of molecular diagnostics can be used, for example, to detect or identify micro-organisms, cancer cells, bacteria and viruses (including HIV) by searching for their nucleic acid sequences. In order

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to prove that a disease is present in a patient, the unique sequence of the target nucleic acid causing the disease must be known, and the sequence must be amplified to facilitate detection. Potential commercial applications for nucleic acid-based molecular diagnostics include infectious disease diagnostics in blood banks, HLA typing for bone marrow and organ transplantation, genetic testing for predisposition to cancers and other common diseases, and genetic fingerprinting of humans, animals and plants.

The success of nucleic acid-based molecular diagnostics will depend on the ability to analyze purified nucleic acid samples from a variety of specimens, including blood, tissue, body fluids and stool, and on automation so that hundreds of samples can be handled concurrently. Other key factors will be the convenience, versatility, and reliability of the nucleic acid separation and purification procedures. The QIAGEN BioRobot series has been developed to handle high-throughput nucleic acid sample preparation and handling tasks in molecular biology laboratories, clinical laboratories, blood banks, forensic projects, and genomics projects. Nucleic acid samples purified on the BioRobot 9604 and BioRobot MDx are ready for use in the demanding and sensitive downstream assays performed in molecular diagnostic applications. In order to broadly address the market for nucleic acid preparation in molecular diagnostics, we are entering into partnerships or other agreements with established companies in the molecular diagnostics market.

In May 2002, we entered into a development, manufacturing, and supply agreement with Roche Molecular Systems, Inc. (RMS), a business area of Roche Diagnostics and Roche Diagnostics Corporation (RDC), the US sales and marketing arm of Roche Diagnostics, which aims to develop and distribute a customized integrated diagnostic system for the preparation, detection, and quantification of nucleic acids from the hepatitis B, hepatitis C, and human immunodeficiency (HIV-1) viruses. The system will use automated sample preparation modules from QIAGEN for nucleic acid purification, based on the BioRobot MDx, and are known as the TaqPrep. Following nucleic acid purification, samples will be transferred to Roche's COBAS TaqMan® platform for amplification and detection, which uses real-time PCR to amplify and detect infectious agents.

In 2000, we acquired a non-exclusive license from AMBION, Inc. for RNAlater technology, which allows stabilization of RNA in animal cells and tissues for reliable gene-expression and gene-profiling analysis. This technology is used in a new product range, the first products of which were launched in 2000. Stabilization of RNA within biological samples is especially important for the molecular diagnostics research market.

In August 1999, we formed PreAnalytiX, a joint venture with Becton, Dickinson and Company to develop, manufacture, and market integrated systems for collecting, stabilizing, and purifying nucleic acids for molecular diagnostic testing. Through this venture, we will be working toward providing clinical laboratories with the standardized, reliable procedures they need for sample collection, stabilization and preparation.

In August 1999, our QIAamp Viral RNA purification technology received approval from the German regulatory authority Paul Ehrlich Institute for sample preparation in hepatitis C virus (HCV) RNA screening of donated blood. This validation is an important breakthrough for us in routine molecular diagnostic screening.

In June 1999, we announced our intent to enter into a supply agreement with Visible Genetics Inc. (VGI). Under the terms of the agreement, we will supply VGI with certain proprietary nucleic acid sample preparation products from our QIAamp product line. VGI intends to market such QIAamp products, in combination with a QIAGEN-developed extension for ultra-low level HIV genotyping, under the name TruPrep™ for use with VGI's HIV TruGene™ HIV genotyping product.

In October 1998, we announced that we had entered into a five-year supply agreement with Abbott Laboratories, Inc. According to the agreement, we will supply Abbott with various proprietary nucleic acid sample purification and preparation products, to be marketed by Abbott after successful adaptation and validation of the combined solution for use with Abbott's LCx probe-based diagnostic system. We will

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retain the rights to market these technologies in all other formats.

In November 1996, we acquired a technology platform for DNA and RNA purification and stabilization of samples such as clinical specimens using cationic detergents from the Iowa Biotechnology Corporation and the University of Iowa. In the transaction, we received an assignment of rights to issued patents and pending patent applications covering the technology. DNA and RNA purification is a key procedure in molecular biology research and nucleic acid-based molecular diagnostics. RNA-based diagnostics require the availability of intact RNA, which rapidly degrades in the absence of a protective agent. Cationic detergents stabilize samples, thus increasing the reliability and potential of nucleic acid-based molecular diagnostics, in particular assays based on RNA. Cationic detergent technology also allows for efficient purification of nucleic acids and is nonhazardous. We believe that this acquired technology portfolio will enhance our technology base for some of our sample preparation applications and will

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provide a method for the stabilization of clinical samples. We believe that it will be able to market this purification and stabilization technology in the blood banking and infectious disease diagnostic markets.

**Genetic Vaccination and Gene Therapy Market**

We believe that the potential use of nucleic acids as vaccines or drugs represents the largest untapped market for nucleic acid separation and purification products. Analysis of data from the Human Genome Project should result in the identification of genes and gene mutations that are responsible for many common diseases and conditions, such as cancer, coronary artery disease, asthma, and obesity. Scientists believe that these discoveries may lead to the development of a new generation of drugs, based either on the delivery of non-mutated genes to prevent or cure disease, or on the development of therapeutics which can mimic the biological functions of genes. A further application, which may emerge from ongoing gene research, is the development of genetic vaccination. Studies suggest that vaccination against diseases may be more effective using nucleic acid fragments from the disease-causing organisms rather than conventional vaccination approaches using recombinant proteins or the inactivated infectious agent. The commercialization of these drugs and vaccines will depend on the availability of large-scale production of ultrapure nucleic acids. Through our alliance with DSM Biologics and Valentis, we provide contract manufacture of bulk quantity plasmid DNA under full cGMP conditions for use in clinical studies and for commercial production. We believe that the use in clinical testing of nucleic acids purified using our technologies and products will give us a strong position in this market once genetic vaccination and gene therapy products become commercially available.

**6. Revenue Breakdown by Geographical Market**

We have production and manufacturing facilities in Germany, United States, Switzerland and Norway, and distribution subsidiaries in the United States, Switzerland, Japan, the United Kingdom and Other Countries (consisting of our subsidiaries in Canada, France, Australia, Italy and Austria). We produce and distribute biotechnology products and services, primarily for the separation and purification of nucleic acids (DNA/RNA). In addition we manufacture and market synthetic nucleic acids. The table below sets forth total revenue during the past three fiscal years by geographical market, which includes revenue from all our product and service offerings. It is not practicable to provide a detail of revenues for each group of similar products and services offered by the Company. Net sales are attributed to countries based on the location of our subsidiary as certain subsidiaries have international distribution.

| Net Sales                  | 2002                  | 2001           | 2000           |
|----------------------------|-----------------------|----------------|----------------|
| Germany*                   | \$ 136,334,000        | \$ 121,744,000 | \$ 99,408,000  |
| United States*             | 221,762,000           | 147,609,000    | 119,925,000    |
| Switzerland*               | 30,953,000            | 27,898,000     | 23,490,000     |
| Japan*                     | 34,937,000            | 34,417,000     | 35,038,000     |
| United Kingdom             | 19,252,000            | 16,282,000     | 12,004,000     |
| Other Countries*+          | 29,730,000            | 17,844,000     | 15,484,000     |
| Subtotal                   | <b>472,968,000</b>    | 365,794,000    | 305,349,000    |
| Intersegment Elimination++ | <b>(174,361,000)</b>  | (102,024,000)  | (88,547,000)   |
| Total                      | <b>\$ 298,607,000</b> | \$ 263,770,000 | \$ 216,802,000 |

\* Includes Net Sales to affiliates.

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- + Other Countries include Canada, France, Australia, Norway, Austria and Italy.
- ++ Represents intercompany sales between affiliates, which are accounted for by a formula based on local list prices and eliminated in consolidation.

### **7. Seasonality**

Our business does not experience specific seasonality. To the extent our academic customers experience increases or decreases in funding arrangements, or to the extent that our customers' activities are slowed, such as during vacation periods, we may experience fluctuations in sales volumes during the year.

### **8. Raw Materials**

We buy materials for our products from many suppliers, and are not dependent on any one supplier or group of suppliers. Raw materials generally include chemicals, raw separation media, biologics, plastics and packaging. No one supplier accounts for a significant total of purchases. Raw materials are generally readily available at competitive, stable prices from a number of suppliers. Certain raw materials are produced under our specifications,

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so we closely monitor stock levels to maintain adequate supplies. We believe we maintain raw materials at a level to ensure reasonable customer service levels, and to guard against normal volatility in the availability.

### **9. Marketing Channels**

We market our products in more than 40 countries throughout the world. We have established subsidiaries in the markets that we believe have the greatest sales potential – the United States, Germany, the United Kingdom, Switzerland, France, Japan, Australia, Canada, Norway and Italy.

We have established a network of highly experienced marketing staff and employ a dedicated field sales force of over 400 people, who sell our products and provide direct support to customers. A significant number of our marketing and sales staff are experienced scientists with academic degrees in molecular biology or related areas. We also have specialized independent distributors and importers serving more than 30 countries.

Our marketing strategy is focused on maintaining our reputation as a provider of innovative, high quality products that offer customers unique advantages. We have developed a range of marketing tools designed to provide customers with direct access to technical support on a frequent basis, as well as to enhance our reputation for technical excellence, high-quality products, and commitment to customer service. Frequent communication with customers enables us to identify market needs, to gain early insight into new developments and business opportunities, and to respond with new products. Our marketing tools include:

**Customer Hotline.** All of our product literature prominently displays a technical service hotline number, offering customers the opportunity to discuss a wide range of technical questions regarding our products and related molecular biology procedures. Ph.D. and M.Sc. scientists, who provide this advice and training without charge to either existing or potential customers, man these telephone lines. While primarily a customer service and marketing tool, the hotline provides us with important customer and market feedback. Worldwide, our technical hotline personnel answer, on average, over 480 customer calls per day, principally calls that are consultative in nature.

**QIAcabinet.** The QIAcabinet is a storage cabinet owned by QIAGEN and placed in customer laboratories at their request. The QIAcabinet is stocked with our products, offering customers the convenience of immediate access, thereby reducing product reorder procedures and shipping costs. We monitor cabinet inventory and bill the customers at regular intervals. We believe that our QIAcabinet can be an effective barrier to competitor entry, while also reducing distribution costs and increasing our visibility in the laboratory.

**QIAGEN Catalog.** We distribute over 180,000 copies of our annual catalog containing detailed information about our products and services.

**QIAGEN News.** This quarterly international publication is distributed to over 120,000 existing and potential customers worldwide and includes new product information, product updates, and articles contributed by customers and by our scientists about new applications.

**Brochures, Application Guides, Product Profiles, Product Flyers.** We publish a variety of literature, including brochures, application guides, product profiles, and product flyers, containing information on products and services, and applications for which our products have been used.

**QIAGEN Mailings.** Direct mailings, which announce new products or offer special sales promotions, are sent out approximately every four weeks to over 120,000 existing and potential customers, providing an efficient vehicle for disseminating information.

**QIAGEN Lab Bulletin.** This personalized monthly electronic newsletter was launched in 2001 for customers in North America, and provides helpful hints and information for molecular biology applications. Six different editions are available for different applications – Cell Biology, Gene Expression Analysis, General Molecular Biology, Genotyping, Molecular Diagnostics, and Protein Analysis. Customers choose the editions that interest them, which are then further personalized based on information provided by the customer as to which features within each edition they would like to receive.

**World Wide Web Site.** The QIAGEN web site ([www.qiagen.com](http://www.qiagen.com)) contains a full on-line product catalog and online ordering system, various support tools and resources. A Japanese language site ([www.qiagen.co.jp](http://www.qiagen.co.jp)) was launched in 2001 and some information is also available in French and German to support these local markets.

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**Other Marketing Tools.** We place over 450 full-page advertisements per year in leading scientific journals such as *Nature*, *Science*, and *Cell*. In addition, we also hold numerous scientific seminars, in which our scientists present technical information at leading academic and industrial research institutes worldwide.

### **10. Patents, Licenses and Proprietary Technologies**

We consider the protection of our proprietary technologies and products for the separation and purification of nucleic acids as the key to the success of our business. We rely on a combination of patents, licenses and trademarks to establish and protect our proprietary rights in our technologies and products. We currently own 41 issued patents in the United States, 31 issued patents in Germany and 170 issued patents in other major industrialized countries, and have approximately 201 pending patent applications. Worldwide, we own 246 granted patents. Our policy is to file all patents in Western Europe, the United States and Japan. U.S. patents have a term of 17 years from the date of issue for patents issued from applications submitted prior to June 8, 1995, and 20 years from the date of filing of the application in the case of patents issued from applications submitted on or after June 8, 1995. Patents in most other countries have a term of 20 years from the date of filing of the patent application. We intend to aggressively prosecute and enforce our patents and otherwise protect our proprietary technologies. We also rely on trade secrets, know-how, continuing technological innovation and licensing opportunities to develop and maintain our competitive position.

An essential component of today's genetic business is the availability of synthetic nucleic acids. Technologies, like PCR, DNA sequencing, SNP genotyping, biochips or synthetic genes represent only a portion of the current market potential for oligonucleotides. In order to accomplish our strategic step into this important segment of the market, we acquired Operon Technologies Inc. (renamed QIAGEN Operon, Inc.). QIAGEN Operon, Inc. has built a leading position in the manufacture and marketing of synthetic nucleic acids, DNA microarrays and synthetic genes.

In 2002, we acquired GenoVision A.S., a Norwegian company (now QIAGEN A.S.). QIAGEN A.S. is focused on the development of reagents and solutions for certain nucleic acid diagnostic markets, such as the HLA market (transplantation diagnostics), in which it has built a leading position. As an integral part of its HLA product offering, QIAGEN A.S. has developed robust and automated solutions for the purification of certain nucleic acids using proprietary magnetic bead technologies and has recently launched instruments and consumables designed for low to medium throughput automated nucleic acid purification using magnetic particles. In addition, QIAGEN A.S. has a deep pipeline of additional new product introductions in this area. Magnetic particles solutions such as these have broad applicability, high flexibility and scalability and can provide sufficient purification qualities and sensitivities for many other applications. As is also the case with our other consumables, these magnetic bead technologies can be used on our high throughput BioRobot instrumentation systems as well as on systems from other instrument manufacturers. We believe that these nucleic acid purification solutions add an attractive product portfolio to our market and technology leadership in nucleic acid purification.

We entered into an agreement in 2001 with Pall Corporation to jointly develop next generation nucleic acid separation and purification products for certain applications in the life science market. We will exclusively market the jointly developed products. The first suite of products will focus on products combining certain of Pall's filtration technologies with certain of QIAGEN's technologies for applications in medium-, high-, and ultra-high throughput separation and purification of certain types of nucleic acids widely analyzed in genomics applications. In 2002, we introduced, as part of the first suite of products, the MinElute 96 UF PCR Purification Kit for high-throughput purification of PCR products for microarray analysis and sequencing. We and Pall Corporation believe that the entire suite of products, which will also be optimized for use on our leading automation solutions, will allow us to further increase our expanding leadership in these market segments.

In 1999, through the acquisition of Rapigene Inc, we acquired the Masscode Cleavable Mass Spectrometry Tag technology. This is the first new DNA tagging technology since the discovery of four-color fluorescence. Unlike fluorescence, which is limited to 4-8 analyses at a time,



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Masscode tags are capable of providing hundreds of simultaneous measurements. A broad patent portfolio that includes issued U.S. and European Patents covers these technologies.

In 1990, Hoffmann-La Roche granted us a worldwide exclusive license for the research and industrial market for a novel protein expression and purification technology based on a Histidine affinity tag and Ni-metal chelate affinity chromatography. This technology was combined with our technology and incorporated in our QIAexpress protein expression and purification product line.

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In 1991, we obtained a worldwide (with the exception of Japan) exclusive license for Hoffmann-La Roche's Oligotex dT30 technology for hybrid capture on polystyrene latex beads, which has been further developed and incorporated in our Oligotex product line.

In 1995, we acquired a license from Hoffmann-La Roche for the use, production and sale of reagents required for PCR in the research market. This license allows us to bundle its sample preparation and DNA clean-up products with PCR reagents and enzymes into complete PCR kits and other innovative PCR systems.

In November 1996, we acquired a technology platform for DNA and RNA purification and stabilization of samples such as clinical specimens using cationic detergents, from the Iowa Biotechnology Corporation and the University of Iowa. In the transaction, we received an assignment of rights to issued patents and pending patent applications covering the technology.

In connection with entering a worldwide, multi-year collaborative agreement with Zeptosens AG in January 2000, we received an exclusive license from Zeptosens AG for the application of planar waveguide (PWG) technology with regard to nucleic acids in the research field.

In 2000, we acquired a non-exclusive license from AMBION, Inc. for *RNAlater* technology, which allows stabilization of RNA in animal cells and tissues for reliable gene-expression and gene-profiling analysis. This technology is used in a new product range, the first products of which were launched in 2000. Stabilization of RNA within biological samples is especially important for the molecular diagnostics research market.

In 1998, we acquired a worldwide exclusive sub-license and certain options from Coley Pharmaceutical Group, Inc. (formerly CpG ImmunoPharmaceuticals, Inc.), concerning the use of immunomodulatory oligonucleotides in the field of veterinary applications.

In addition to the above licenses, we acquired further licenses and/or options to licenses, pertaining to our core technologies and related fields.

In 2001, we commenced a strategic alliance on ultra-sensitive microarray labeling and detection technology with Genicon Sciences. We also signed an agreement for multi-application labeling technology with Kreatech Biotechnology B.V. and formed a strategic alliance in connection with magnetic polymer bead technologies with Polysciences, Inc.

Our strategy includes the use of strategic alliances to augment our product development efforts with complementary technologies and to leverage our marketing and distribution capabilities with respect to select market opportunities. In 1990, 3M granted QIAGEN exclusive and world-wide rights for nucleic acid separation and purification applications using 3M's Empore membrane technology (originally developed for medical applications). QIAwell, a key product targeting the DNA sequencing market, combines Empore technology with our anion-exchange technology. In addition, 3M has made substantial investments in production facilities which now produce 8-well and 96-well consumable components for us.

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In 1981, prior to the formation of QIAGEN, Dr. Metin Colpan and Dr. Detlev Riesner granted limited non-transferable access to an early patent for an anion-exchange resin, which is now owned by QIAGEN, to the owner of Macherey-Nagel GmbH & Co. Macherey-Nagel was an investor in QIAGEN from 1985 to 1988. Macherey-Nagel's right to use this anion-exchange resin is limited in both sales volume and format of the product. QIAGEN also has independent proprietary patent positions on a range of substantial improvements to this early technology.

Our practice is to require employees, consultants, outside scientific collaborators and sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed by or made known to the individual during the course of the individual's relationship with QIAGEN is to be kept confidential and not disclosed to third parties, subject to a right to publish certain information in scientific literature in certain circumstances and subject to other specific exceptions. In the case of employees, the agreements provide that all inventions conceived by the individual while employed will be our exclusive property.

Our patent positions, like similar technology based companies, involve complex legal and factual questions and may be uncertain. In addition, patent applications in the United States are maintained in secrecy until patents are issued. Publications of discoveries in the scientific or patent literature tend to lag behind actual discoveries by several months. Consequently, no assurance can be given that patents will issue from any of our applications or, if patents do issue, that the claims allowed will be sufficiently broad to protect our technology. Further, no assurance can be given that any issued patents owned by or licensed to us will not be challenged, invalidated or circumvented, or that the

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rights granted thereunder will provide us competitive advantages. In addition, there can be no assurance that any confidentiality agreements between QIAGEN and its employees, consultants, outside scientific collaborators and sponsored researchers and other advisors will provide meaningful protection for our trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information.

### **11. Competition**

We believe that our primary competition stems from traditional separation and purification methods, such as phenol extraction, cesium chloride density gradient centrifugation, and precipitation. These methods utilize widely available reagents and other chemicals supplied by companies such as Sigma Chemical Company and Roche Diagnostics GmbH (Applied Sciences Division). We compete with such methods through our innovative technologies and products, which offer a comprehensive solution for nucleic acid separation and purification needs and provide significant advantages over traditional methods with respect to speed, reliability, convenience, and ease of use. See Technical Overview of QIAGEN.

We also experience, and expect to continue to experience, competition in different segments of our business from other companies providing nucleic acid separation and purification products in kit form and reagents for PCR and transfection. Competitors include: Promega Corp., Millipore Corp., Roche Diagnostics and Macherey-Nagel GmbH for nucleic acid separation and purification; Applied Biosystems, Invitrogen Corp. and Promega Corp. for PCR reagents; Invitrogen Corp. and Promega Corp. for transfection reagents. We believe that our proprietary technologies and products offer significant advantages over competitors' products, with regard to purity, speed, reliability, and throughput.

We also experience, and expect to continue to experience, competition from other companies providing synthetic DNA and SNP genotyping and sequencing services. International competitors for synthetic DNA include: Invitrogen Corp, Sigma Genosys, Amersham Pharmacia Biotech, MWG-Biotech AG, and PerkinElmer. International competitors SNP genotyping and sequencing services include: Integrated DNA Technologies, Inc., Invitrogen Corp, Sigma Genosys Inc., Sigma-Aldrich Corporation, MWG-Biotech AG, Sequenom, Inc., Orchid Biosciences, Inc., and Third Wave Technologies, Inc.

We believe that our competitors do not have the same comprehensive approach to nucleic acid separation and purification, or the same technology for production of synthetic DNA or for SNP genotyping and therefore cannot provide the broad range and depth of products and services that we offer. We believe that our proprietary technologies and products offer significant advantages over competitors' products and services, with regard to purity, speed, reliability, and throughput. We also believe that our consolidated net sales are significantly larger than the sales of any competitor.

Our continued future success will rely in large part on our ability to maintain our technological advantage over competing products, expand our market presence and preserve customer loyalty. There can be no assurance that we will be able to compete effectively against our existing or future competitors or that developments by others will not render our technologies or products non-competitive.

### **12. International Operations**

Our business involves operations in several countries. Our principal production and manufacturing facilities for consumable and BioRobot products are located in Germany, Norway and in the U.S. in Maryland, with an additional instrumentation production site in Switzerland. We operate several facilities in the U.S. and also have established sales subsidiaries in Japan, the United Kingdom, France, Switzerland, Australia,

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Canada, Italy and, since June 2002, in Norway and Austria. In addition, our products are sold through independent distributors serving more than 32 other countries.

Conducting operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. We have invested heavily in computerized information systems in order to manage more efficiently the widely dispersed components of our operations. We use SAP as our business information system to integrate our North American and European subsidiaries. In the past year we have increased utilization of our SAP system with the opening of our state-of-the-art production and distribution facility in Germantown, Maryland (QIAGEN Sciences, Inc.) and integrating Xeragon after our acquisition. We also integrated systems with third party contract manufacturers via SAP and implemented a module to improve field service operations for our Instruments products.

As a result of our international operations, a significant portion of our business is conducted in currencies

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other than the U.S. dollar. In 2002, approximately 48% of our net sales were denominated in currencies other than the U.S. dollar. In addition, certain expenses associated with our production and manufacturing facilities in Germany, including capital lease obligations and capital investment financing, are denominated in euros. Consequently, our operations are subject to fluctuations in the value of the euro, as well as the other currencies in which we conduct our business, relative to the U.S. dollar. See [Quantitative and Qualitative Disclosure About Market Risk - Currency Fluctuations](#) .

International business is subject to various risks, including general economic conditions in the countries in which we operate, overlap of various tax structures, unexpected changes in regulatory requirements, compliance with a variety of foreign laws and regulations, and longer accounts receivable payment cycles in certain countries. Other risks that may be associated with our international operations include import and export licensing requirements, trade restrictions, exchange controls and changes in tariff and freight rates.

### **13. Government Regulation**

We are not subject to direct regulation other than regulation generally applicable to businesses pursuant to various laws and regulations in effect in the different jurisdictions in which we operate, including laws and regulations applicable to environmental matters, such as the handling and disposal of hazardous wastes. Our research and development activities involve the controlled use of small amounts of hazardous materials, chemicals and radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by applicable regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, we could be held liable for any damages that result and any such liability could have a material adverse effect on us. However, we do not expect that compliance with governmental regulations to which we are subject will have a material effect on our capital expenditures, earnings or competitive positions.

Sales volumes of certain of our products in development may be dependent on commercial sales by our customers of diagnostic and pharmaceutical products, which will require preclinical studies and clinical trials. Such trials will be subject to extensive regulation by governmental authorities in the United States, including the FDA and equivalent agencies in other countries, and involve substantial uncertainties.

### **Property, Plant and Equipment**

Our production and manufacturing facilities for consumable products are located in Hilden and Erkrath, Germany. The instrument production facility is located at the QIAGEN Instruments AG facility in Hombrechtikon, Switzerland. During 2002, we made investments in and expanded the Hombrechtikon facility. Over the last several years, we have made substantial investments in automated and interchangeable production equipment to increase our production capacity and improve efficiency. For GMP production, special GMP areas were built in our facilities at Hilden and Erkrath. Our production and manufacturing operations are highly integrated and benefit from sophisticated inventory control. We have also installed and continue to expand production-planning systems that are included in our integrated information and control system based on the business software package SAP R/3 from SAP AG. Worldwide, SAP integrates our material operating subsidiaries. Our production management personnel are highly qualified and many have engineering degrees.

The consumable products manufactured at QIAGEN GmbH are produced under ISO 9001:1994/EN 46001:1996 standards; we received our certification in January 1999. QIAGEN Instruments AG which produces the majority of our BioRobot® instrumentation product line, received ISO 9001 certification in May 1997. Our ISO 9001 and EN 46001 certifications form part of our ongoing commitment to providing our customers high quality, state-of-the-art products and technologies for the handling, separation and purification of nucleic acids and to the

development of our Total Quality Management system.

Our facilities in Hilden, Germany currently occupy approximately 229,000 square feet, some of which is leased pursuant to separate contracts expiring between the years 2003 and 2018, including the lease related to our research and development facility which was completed in the first quarter of 1999. In two separate transactions between July 1997 and February 1998, QIAGEN purchased a parcel of land, directly adjacent to our existing German facilities, measuring approximately 549,000 square feet. During 2002, we substantially completed a 115,000 square foot production facility and an 149,000 square foot administration building on this land. The estimated cost for these facilities is approximately EUR 55.3 million (approximately \$58.0 million), of which approximately \$57.3 million has been incurred as of December 31, 2002, and is being financed primarily with bank loans. QIAGEN also leases cGMP production facilities in Germany.

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We increased our production capacity with the establishment of a manufacturing and research facility in the United States. In 1999, the new North American manufacturing and research and development headquarters, QIAGEN Sciences, Inc. closed the purchase of an 18-acre site for approximately \$3.2 million in Germantown, Maryland. Construction began in March 2000, and in November 2000 QIAGEN Sciences exercised the option to purchase an additional adjacent lot of approximately 6 acres for \$1.2 million. The purchase of this additional lot allows for future expansion of up to 400,000 square feet of facility space. Construction was financed primarily by intercompany loans and long-term bank debt. Early in 2002, construction on the manufacturing portion of the facility was completed at a cost of approximately \$57.5 million. The 200,000 square foot Maryland facility consists of several buildings in a campus-like arrangement and is intended to accommodate over 300 employees. The facility construction was completed in the first quarter of 2002 and additional DNA manufacturing space was completed in the second quarter of 2002. Both of these facilities are now in use. Currently siRNA/RNA research and development lab and production space, as well as additional office space, is under construction and is anticipated to be completed in the first quarter of 2003. Estimated costs for this additional construction are \$3.1 million. QIAGEN Sciences, Inc. is integrated with our other North American and European subsidiaries through our SAP business information systems and utilizes production-planning, quality management and inventory management modules from SAP in order to increase efficiency.

Our U.S. sales subsidiary located in Valencia, California occupies approximately 80,000 square feet. The lease has been extended through August 31, 2004. QIAGEN Operon, Inc., located in Alameda, California, leases approximately 39,000 square feet of office, production and warehouse space. This lease expires in November 2005, with options to extend until November 2010. A further production site in Germany, QIAGEN Operon GmbH, which has an anticipated capacity of 10,000 synthetic nucleic acids per day, commenced operations in 2001. Our corporate headquarters are located in leased office space in Venlo, The Netherlands. Other subsidiaries throughout the world lease small amounts of space.

We believe that our existing production and distribution facilities can support our planned production needs for the next 36 months, during which time additional capacities will be added as discussed above. The additional production capacities added by the new facilities are anticipated to support production needs through at least 2006. Our production and manufacturing operations are subject to various federal, state, and local laws and regulations including environmental regulations. We believe we do not have any material issues relating to these laws and regulations.

## **Item 5. Operating and Financial Review and Prospects**

*This section contains a number of forward-looking statements. These statements are based on current management expectations, and actual results may differ materially. Among the factors that could cause actual results to differ from management's expectations are those described in Risk Factors above, and Business Factors below.*

### ***Overview***

We produce and distribute biotechnology products, primarily for the separation and purification of nucleic acids (DNA/RNA) as well as manufacture and market synthetic nucleic acids and related products and services. We believe that we are the world's leading provider of innovative enabling technologies and products for the separation and purification of nucleic acids based on the nature of our products and technologies and as supported by independent market studies. We operate exclusively in the life sciences industry, and develop, manufacture and market a broad portfolio of proprietary technologies and products, which meet the needs of the academic and industrial research markets. Our products enable customers to reliably and rapidly produce high purity nucleic acids without using hazardous reagents or expensive equipment.



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We segment our business based on the geographic locations of our subsidiaries. Our reportable segments include research, production and manufacturing facilities in Germany, United States, Switzerland and Norway, and distribution subsidiaries in the United States, Switzerland, Japan, the United Kingdom and Other Countries (consisting of subsidiaries in Canada, France, Australia, Italy and Austria). Our holding company is located in the Netherlands. Reportable segments derive revenues from our entire product and service offerings.

Since 1998, we have had compound annual growth of approximately 32% in net sales and 20% in net income, after acquisition charges. In recent years we have made a number of strategic acquisitions expanding our technology and product offerings. These acquisitions include:

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On June 14, 2002, we completed the acquisition of GenoVision A.S. located in Oslo, Norway. GenoVision A.S. was formed in 1998 and has two wholly owned subsidiaries and one majority owned subsidiary. We believe that the acquisition will provide us with unique, automated solutions for the purification of nucleic acids based on GenoVision's proprietary magnetic particle technologies.

On April 17, 2002, we completed the acquisition of Xeragon, Inc. of Huntsville, Alabama, pursuant to an agreement and plan of merger with Xeragon dated as of March 28, 2002. Established in 2001, Xeragon is a market and technology leader for products and services focusing on synthetic nucleic acids, particularly siRNA.

On March 31, 2001, we completed the acquisition of the Sawady Group of companies located in Tokyo, Japan in a pooling of interests transaction. We believe that the Sawady Group has built a very strong reputation and position as one of the largest suppliers of synthetic nucleic acids in Japan. We believe that the worldwide market for synthetic nucleic acid products is growing rapidly. Subsequent to the acquisition, Sawady was renamed QIAGEN Sciences, K.K.

In 2002 we completed our new North American Headquarters in Germantown, Maryland and also completed new production and office facilities in Hilden, Germany. In December 2002, we closed the QIAGEN Genomics facility located in Bothell, Washington and relocated certain activities to our recently opened facilities in Germantown, Maryland and Hilden, Germany. During 2002, we released over 25 new products.

To date, we have funded our growth through internally generated funds, debt, the private sale of equity, and through proceeds from the sale of securities to the public.

## ***Business Factors***

This report contains forward-looking statements that are subject to certain risks and uncertainties. These statements include statements regarding (i) our ability to maintain our relationships with our customers and our broad range of products, (ii) our ability to stay abreast of technological developments and to develop and introduce new products, (iii) the size, nature and development of our markets and potential markets, (iv) our ability to penetrate and expand these markets and trends in the demand for our existing and new products, (v) our ability to increase our production efficiency as a result of expansion in our production capacity and to manage growth and our international operations, (vi) the integration of strategic acquisitions and complementary business investments, (vii) variability of operating results and (viii) our liquidity (including the effects of currency fluctuations). Such statements are based on management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the following: risks associated with our expansion of operations, including the acquisition of new companies; variability in our operating results from quarter to quarter; management of growth, international operations, and dependence on key personnel; intense competition; technological change; our ability to develop and protect proprietary products and technologies and to enter into collaborative commercial relationships; our future capital requirements; general economic conditions and capital market fluctuations; and uncertainties as to the extent of future government regulation of our business. As a result, our future development efforts involve a high degree of risk. For further information, refer to the more specific risks and uncertainties discussed throughout this Annual Report.

## ***Application of Critical Accounting Policies***

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The preparation of our financial statements in accordance with accounting principles generally accepted in the United States requires management to make assumptions that affect the reported amounts of assets, liabilities and disclosure of contingencies as of the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Critical accounting policies are those that require the most complex or subjective judgments often as a result of the need to make estimates about the effects of matters that are inherently uncertain. Thus, to the extent that actual events differ from management's estimates and assumptions, there could be a material impact to the financial statements. In applying our critical accounting policies, at times we used accounting estimates that either required us to make assumptions about matters that were highly uncertain at the time the estimate was made or it is reasonably likely that changes in the accounting estimate may occur from period to period that would have a material impact on the presentation of our results of operations, financial position or cash flows. Our critical accounting policies are those related to revenue recognition, accounts receivable, investments, goodwill and other intangibles, and income taxes. We reviewed the development, selection, and disclosure of our critical accounting policies and estimates with the Audit Committee of our Supervisory Board.

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**Revenue Recognition.** We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements (SAB 101), as amended by SAB 101A and 101B. SAB 101 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Determination of criteria (3) and (4) could require management's judgments regarding the fixed nature of the fee charged for services rendered and products delivered and the collectibility of those fees. Should changes in conditions cause management to determine that these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected.

**Accounts Receivable.** Our accounts receivable are unsecured, and we are at risk to the extent such amounts become uncollectible. We continually monitor accounts receivable balances, and provide for an allowance for doubtful accounts at the time collection may become questionable based on payment history or age of the receivable. Since a significant portion of our customers are funded through academic or government funding arrangements, past history may not be representative of the future. As a result, we may have write-offs of accounts receivable in excess of previously estimated amounts or may in certain periods increase or decrease the allowance based on management's current estimates.

**Long-term Marketable Securities.** We hold 224,000 shares in Genome Pharmaceuticals Corporation AG (GPC), and since we intend to hold these shares for more than one year, the investment is classified as a long-term marketable security. At December 31, 2002, these shares had a fair market value of \$735,000 with a gross unrealized loss of \$926,000 included in other comprehensive income or loss as we consider the decline in value temporary. In reaching our conclusion, we considered many factors including current analyst recommendations, recent announcements of the company, and recent stock activity compared to similar companies. These securities have been in an unrealized loss position since April 30, 2002. At September 30, 2002, our unrealized loss was at the highest point, and at December 31, 2002, and during the first quarter of 2003, the unrealized loss since September 30, 2002 decreased as the stock value increased. The methodology used to assess the nature of a decline in value is inherently uncertain. Should we later determine that the decline is other than temporary, it could have a material impact to our financial statements.

**Investments.** We have equity investments accounted for under the cost method. We periodically review the carrying value of these investments for permanent impairment, considering factors such as the most recent stock transactions, book values from the most recent financial statements, and forecasts and expectations of the investee. Estimating the fair value of these non-marketable equity investments in life science companies is inherently subjective, and if actual events differ from management's assumptions, it could require a write-down of the investment that could materially impact our financial position and results of operations.

In addition, generally accepted accounting principles require different methods of accounting for an investment depending on the level of control that we exert. Assessing the level of control involves subjective judgments. If management's assumptions with respect to control differ in future periods and we therefore have to account for these investments under a method other than the cost method, it could have a material impact to our financial statements.

**Goodwill and Other Intangible Assets.** We account for acquisitions under the purchase method of accounting, typically resulting in goodwill. Statement of Financial Accounting Standards (SFAS) No. 142, Goodwill and Other Intangible Assets, requires us to assess goodwill for impairment at least annually in the absence of an indicator of possible impairment and immediately upon an indicator of possible impairment. The statement requires estimates of the fair value of our reporting units. If we determine that the fair values are less than the carrying amount of goodwill recorded, we must recognize an impairment in our financial statements. At December 31, 2002, goodwill and intangible assets totaled \$25.6 million and \$12.8 million and were included in the following segments:

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|                 | <u>Goodwill</u>             | <u>Intangibles</u>          |
|-----------------|-----------------------------|-----------------------------|
| Germany         | \$ 299,000                  | \$ 3,721,000                |
| United States   | 3,758,000                   | 3,967,000                   |
| Japan           | 1,189,000                   |                             |
| Norway          | 20,323,000                  | 4,416,000                   |
| Switzerland     |                             | 162,000                     |
| The Netherlands |                             | 484,000                     |
|                 | <u>                    </u> | <u>                    </u> |
| <b>Total</b>    | <b>\$ 25,569,000</b>        | <b>\$ 12,750,000</b>        |

The \$3.8 million of goodwill in the United States, and the \$20.3 million of goodwill in Norway is related to our 2002 acquisitions of Xeragon, Inc. and GenoVision A.S., respectively. At the time of acquisition, each of these companies were valued by independent appraisers utilizing proven valuation procedures and techniques who determined the value of the intangible assets acquired. These intangible assets include developed technology and know-how, and goodwill. The next annual assessment of the goodwill related to these acquisitions will be made mid-year in 2003. These valuations rely on estimates of future cash flows. Although we believe the estimates used in the valuations are reasonable, given that both the companies and that the technologies acquired are new to us, there may be significant changes to the estimates used in future assessments, which could produce materially different results.

In the fourth quarter, we performed our annual impairment assessment of the remaining goodwill (using data as of December 31, 2002) in our U.S., Japan and German segments in accordance with the provisions of SFAS No. 142. In testing for potential impairment, we measured the estimated fair value of our reporting units based upon discounted future operating cash flows using a discount rate reflecting our estimated average cost of funds. Differences in assumptions used in projecting future operating cash flows and cost of funds could have a significant

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impact on the determination of impairment amounts. In estimating future cash flows, we used our internal budgets. Our budgets were based on recent sales data for existing products, planned timing of new product launches or capital projects, and customer commitments related to new and existing products. These budgets also included assumptions of future production volumes and pricing.

For Japan and Germany, we concluded that no impairment existed. If our estimates of projected future cash flows were too high by 10%, there would be no impact on the reported value of goodwill at December 31, 2002. In the U.S., we recorded an impairment of developed technology of \$2.0 million and goodwill of \$1.2 million in connection with the closing of the QIAGEN Genomics facility located in Bothell.

Due to the numerous variables associated with our judgments and assumptions relating to the valuation of the reporting units and the effects of changes in circumstances affecting these valuations, both the precision and reliability of the resulting estimates are subject to uncertainty, and as additional information becomes known, we may change our estimate.

**Income Taxes.** The calculation of our tax provision is complex due to the international operations and multiple taxing jurisdictions in which we operate. We have significant deferred tax assets due to net operating losses (NOL) in the United States and other countries, realization of which is not assured and is dependent on generating sufficient taxable income in the future. Although Management believes it is more likely than not that we will generate sufficient taxable income to utilize all NOL carryforwards, evaluating the NOLs related to our newer subsidiaries requires us to make estimates that we believe are reasonable, but may also be highly uncertain given that we do not have direct experience with the company or its products and thus the estimates also may be subject to significant changes from period to period as we gain experience. At December 31, 2002, we have recorded a deferred tax asset of \$2.3 million for this NOL related to the GenoVision Companies, which were acquired in June 2002. To the extent that our estimates of future taxable income are insufficient to utilize all available NOLs, a valuation allowance will be recorded in the provision for income taxes in the period the determination is made, and the deferred tax assets will be reduced by this amount, which could be material. Further, our holding company, located in The Netherlands, has had a history of losses and thus also has a sizeable NOL. Due to the history of losses of the holding company, we have recorded a full valuation allowance against this deferred tax asset. Should the holding company be profitable in the future and lead management to believe that it is more likely than not that we will realize all or a portion of the NOL, then the estimated realizable value of the deferred tax asset would be recorded and we would provide for taxes at the current tax rate. In the event that actual events differ from management's estimates, or to the extent that these estimates are adjusted in the future, any changes to the valuation allowance could materially impact our financial position and results of operations.

We operate in numerous tax jurisdictions and are thus subject to audit by various tax authorities. The German taxing authorities are currently examining the treatment of expenses related to stock options, which are required to be accrued when vested under the German Commercial Code, due to a reimbursement agreement between QIAGEN N.V. and QIAGEN GmbH which requires that QIAGEN GmbH make payments to QIAGEN N.V. of an amount equal to the spread on stock option exercises. Based on the advice received from tax experts and our tax advisors, we have accrued for the expense of the stock options in the statutory financial statements and in our German tax returns, but such expenses are not recorded in the consolidated financial statements prepared under U.S. GAAP. The matter being examined by the taxing authorities is whether the option expenses are deductible for tax purposes on an accrual basis or only on a payment basis upon the exercise of the options. Accordingly, should the taxing authorities ultimately conclude that the stock option expenses are not deductible for tax purposes on an accrual basis, there would be no income statement impact or impact on earnings per share to our U.S. GAAP financial statements although we may be required to make additional tax payments. Given the uncertainty of the matter at this time, there is no reasonable amount of potential payment that can be determined, but we estimate that it could range from zero to approximately \$12.0 million. Currently, we believe our position will be upheld and that no further payments will be required.

The above listing is not intended to be a comprehensive list of all our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles in the United States, with limited or no need for management's judgment. There are also areas in which management's judgment in selecting available alternatives may or may not produce a materially different result. See our audited consolidated financial statements and notes thereto which begin on page F-1 of this Annual Report on Form 20-F which contain a description of accounting policies and other disclosures required by generally accepted accounting principles in the United States.



**Table of Contents*****Authoritative Pronouncements***

In January 2003, the Financial Accounting Standards Board (FASB) issued Interpretation No. 46, Consolidation of Variable Interest Entities. This interpretation requires a company to consolidate a variable interest entity if it is designated as the primary beneficiary of that entity even if the company does not have a majority of voting interests. A variable interest entity is generally defined as an entity where its equity is unable to finance its activities or where the owners of the entity lack the risk and rewards of ownership. At December 31, 2002, we did not have any unconsolidated variable interest entities.

On December 31, 2002, the Financial Accounting Standards Board (FASB) issued SFAS No. 148, Accounting For Stock-Based Compensation Transition and Disclosure. SFAS No. 148 provides additional guidance for those entities that elect to voluntarily adopt the accounting provisions of SFAS 123, Accounting For Stock-Based Compensation. The Company has adopted this pronouncement for the year ending December 31, 2002 and has included the required disclosures in this annual report.

In July 2002, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 146, Accounting for Costs Associated with Exit or Disposal Activities. SFAS No. 146 requires that a liability be recognized for exit and disposal costs only when the liability has been incurred and when it can be measured at fair value. The statement is effective for exit and disposal activities that are initiated after December 31, 2002, with earlier application encouraged. We adopted this statement for the year ended December 31, 2002 in connection with the closure of our QIAGEN Genomics facility and related activities.

In April 2002, the FASB issued SFAS No. 145, Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections. In addition to amending or rescinding other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions, SFAS No. 145 precludes companies from recording gains and losses from the extinguishment of debt as an extraordinary item. The statement is effective January 1, 2003 and is not anticipated to have any impact on our financial position, results of operations or cash flows.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations. SFAS No. 143 requires entities to record the fair value of a liability for an asset retirement obligation in the period in which the obligation is incurred. When the liability is initially recorded, the entity capitalizes the cost by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted to its present value each period, and the capitalized cost is depreciated over the useful life of the related asset. This statement is effective on January 1, 2003 and is not anticipated to have any impact on our financial position, results of operations or cash flows.

***Results of Operations***

The following table sets forth certain income and expense items as a percentage of net sales for the periods indicated:

|               | <u>2002</u> | <u>2001</u> | <u>2000</u> |
|---------------|-------------|-------------|-------------|
| Net sales     | 100.0%      | 100.0%      | 100.0%      |
| Cost of sales | 32.3        | 30.2        | 30.2        |



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|  |             |              |             |
|--|-------------|--------------|-------------|
| Gross profit   | <u>67.7</u> | <u>69.8</u>  | <u>69.8</u> |
| Operating expenses:  |             |              |             |
| Research and development                                       | 9.4         | 10.1         | 10.8        |
| Sales and marketing  | 25.1        | 24.6         | 25.3        |
| General and administrative                                     | 14.1        | 13.7         | 14.4        |
| Closure and related costs                                      | 3.6         |              |             |
| Acquisition costs  | 0.6         | 1.1          | 2.5         |
| In process research and development                            | 0.4         |              |             |
|  | <u>14.5</u> | <u>20.3</u>  | <u>16.8</u> |
| Other income (expense)   | (1.5)       | 1.1          | 1.2         |
|  | <u>13.0</u> | <u>21.4</u>  | <u>18.0</u> |
| Income before provision for income taxes and minority interest | 13.0        | 21.4         | 18.0        |
| Provision for income taxes                                     | 5.2         | 8.3          | 8.3         |
| Minority interest  |             |              |             |
|  | <u>7.8%</u> | <u>13.1%</u> | <u>9.7%</u> |
| Net income   |             |              |             |

In 2002, excluding the costs related to the acquisition and closure activities, income from operations would have been 19.0% as a percentage of net sales, and net income would have been 11.2%, as a percentage of net sales. In 2001,

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without the \$3.0 million acquisition charge related to our acquisition of the Sawady Group of companies, income from operations would have been 21.4% and net income would have been 13.7%, as a percentage of net sales. Excluding the acquisition costs of \$5.4 million in 2000 related to Operon Technologies, the percentage for income from operations would have been 19.3% and net income would have been 12.2%, as a percentage of net sales.

### ***Fiscal Year Ended December 31, 2002 compared to 2001***

#### **Net Sales**

In 2002, net sales increased 13% to \$298.6 million from \$263.8 million in 2001. Net sales in the United States increased to \$156.0 million in 2002 from \$142.4 million in 2001, and net sales outside the United States increased to \$142.6 million in 2002 from \$121.4 million in 2001.

Net sales within the United States increased primarily due to net sales at QIAGEN, Inc., located in Valencia, California. QIAGEN, Inc. reported an increase of 14% (or \$15.4 million) during the 2002 year over the comparable period in 2001, offset by lower sales at QIAGEN Operon, Inc. located in Alameda. Net sales at QIAGEN Operon decreased 12% (or \$3.2 million) in 2002 compared to 2001. The decrease in net sales at Operon was primarily the result of higher sales discounts due to greater price competition in the synthetic DNA market. Further, GenoVision Inc., which was acquired in the second quarter of 2002 and is located in Philadelphia, reported sales of \$1.8 million in the second half of 2002.

Outside of the United States, the increase in net sales was primarily due to strong growth at QIAGEN GmbH, located in Germany, which reported an increase of 18% (\$7.3 million), QIAGEN Ltd., located in England, which reported an increase of 18% (\$3.0 million), and QIAGEN K.K., located in Japan, which reported an increase of 16% (\$1.4 million) for 2002 compared to 2001. Additionally, GenoVision A.S. Vertriebs-GmbH, which was acquired in the second quarter of 2002 and is located in Austria, reported sales of \$3.0 million in the second half of 2002.

While unit sales of consumable products increased during the quarter, we expect a slower rate of sales growth for the range of products designed for large-scale plasmid DNA applications as the market for such products matures. We regularly introduce new products in order to extend the life of our existing product lines as well as to address new market opportunities. During 2002, we released over 25 new products including the LiquiChip Protein Suspension Array System, providing multiplex, bead-based protein assays. In addition, uncharged NTA Agarose and NTA Superflow were developed for efficient metal binding and purer protein preparations. The SensiChip DNA Array System (developed by QIAGEN and Zeptosens AG) provides complete microarray solutions and the QIAGEN<sup>®</sup> HiLight Array Detection System uses non-fluorescent Resonance Light Scattering (RLS) Technology for highly sensitive array detection. The BioRobot<sup>®</sup> MDx was introduced for molecular diagnostics research applications, and the QIAamp<sup>®</sup> Virus BioRobot MDx Kit and QIAamp DNA Blood BioRobot MDx Kits are specifically for use on the new workstation. QIAamp MinElute Virus Spin and Vacuum Kits were also developed for efficient purification of viral RNA and DNA from plasma, serum, and cell-free body fluids in low elution volumes for highly concentrated nucleic acids. RNA<sup>later</sup> TissueProtect Tubes were launched for stabilization and protection of RNA in tissues. Among our new products for PCR are the QIAGEN Multiplex PCR Kit, developed for fast and efficient multiplex PCR and the QIAGEN A-Addition Kit for efficient modification of blunt-ended PCR products. The following new Array-Ready Oligo Sets were also launched: the *C. elegans* Genome Oligo Set Version 1.0, the Arabidopsis Genome Oligo Set Version 1.0, and the Human Signal Transduction Subset. In addition, the Cancer siRNA Oligo Set was launched for gene silencing applications, which was the first set of disease-specific siRNAs for the life sciences market.

Changes in exchange rates continued to affect the growth rate of net sales for the year ended December 31, 2002. A significant portion of our revenues is denominated in European Union euros. Using identical foreign exchange rates for both years, net sales would have increased

approximately 12% as compared to the reported increase of 13% for the year ended December 31, 2002. See Currency Fluctuations.

**Gross Profit**

Gross profit was \$202.1 million or 68% of net sales in the year ended December 31, 2002 as compared to \$184.1 million or 70% of net sales for the same period in 2001. The absolute dollar increase is attributable to the increase in net sales. Our separation and purification consumable products carry a higher gross profit than many of our other products, such as instrumentation and synthetic nucleic acid products. Therefore, increased revenues from instrumentation and synthetic nucleic acid products as a percentage of net sales, coupled with lower prices achieved on synthetic nucleic acids, contributed to decreased gross profit in 2002. Additionally, gross profit was partially impacted by manufacturing overhead incurred at our new Germantown, Maryland manufacturing facility, which could not be fully offset by revenues due to lower than expected sales levels. We continue to develop additional instrumentation products that meet the needs of the molecular diagnostic and genomics markets and anticipate future

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increases in sales of instrumentation products. New instrumentation products introduced in 2002 include the BioRobot MDx, the LiquiChip Workstation and the SensiChip Array Detection System, and accessories such as the BioRobot RapidPlate and the BioRobot Twister Robotic Arm Systems. In the synthetic DNA market there has been greater price competition, resulting in greater discounts, and as a result the gross margins on these products were lower in 2002 than compared to 2001.

## **Research and Development**

Research and development expenses increased 5% to \$28.2 million (9% of net sales) in 2002 compared with \$26.8 million (10% of net sales) in 2001. The GenoVision companies, which were acquired late in the second quarter of 2002, reported research and development expenses of \$1.5 million in the second half of 2002. As we continue expansion of our research and development facilities and new product development capabilities, additional research and development expense will be incurred related to facility costs and obtaining and retaining employees for the research and development efforts. QIAGEN's new U.S. facility located in Germantown, Maryland will eventually include research and development activities. We have a strong commitment to research and development, as demonstrated by the recent expansion of our German research facility along with our new U.S. facility, and anticipate that absolute research and development expenses may increase significantly.

## **Sales and Marketing**

Sales and marketing expenses increased 16% to \$75.1 million (25% of net sales) in 2002 from \$64.8 million (25% of net sales) in 2001. Increased sales and marketing costs are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses and other promotional items. Additionally, we began amortizing the costs of a Customer Relationship Management system (CRM) which was launched during the first quarter of 2002. Sales and marketing expenses attributed to QIAGEN Sciences, Inc., which commenced operations in 2002, totaled \$2.5 million in 2002. We anticipate that selling and marketing costs will continue to increase along with new product introductions and continued growth in sales of our products.

## **General and Administrative**

General and administrative expenses increased 17% to \$42.0 million (14% of net sales) in 2002 from \$36.0 million (14% of net sales) in 2001. This absolute dollar increase primarily represents the increased costs required to support our administrative infrastructure that continues to expand along with our growth. General and administrative expenses attributed to QIAGEN Sciences, Inc., which commenced operations in 2002, totaled \$5.0 million in 2002 compared to \$2.4 million in 2001. General and administrative costs were also higher at QIAGEN Instruments (\$3.0 million in 2002 compared to \$2.1 million in 2001) primarily as a result of higher operating costs related to a recently expanded facility. The GenoVision companies and Xeragon, which were acquired in the second quarter of 2002, reported general and administrative expenses of \$656,000 and \$555,000, respectively, in the second half of 2002.

## **Acquisition and Related Costs**

On June 14, 2002, QIAGEN completed the acquisition of GenoVision A.S. located in Oslo, Norway. In connection with this merger, we recorded acquisition costs of approximately \$2.8 million, which include \$1.2 million of in-process research and development and \$1.6 million for equipment impairment.

On March 31, 2001, QIAGEN acquired the Sawady Group of companies located in Tokyo, Japan. Acquisition and related charges totaled approximately \$3.0 million, which include approximately \$1.0 million of direct transaction costs (primarily legal and other professional fees) and approximately \$2.0 million primarily relating to the relocation, closure and elimination of leased facilities, such as duplicate field offices.

**Closure and Related Costs**

During December 2002, we decided to close the QIAGEN Genomics site in Bothell, Washington and to relocate several of the site's activities to other locations, mainly to our recently opened facilities in Germantown, Maryland and Hilden, Germany. The closure and relocation is intended to be completed in the second quarter of 2003 and is expected to contribute to our future profitability as a result of lower operating costs. While we will close our Bothell facility, the Masscode intellectual property will continue to serve as an important technology base for tagging nucleic acids and proteins. We will also shift our focus from selling the benefits of this technology as a service to supporting our technology access partners in the United States and Japan with the products and accessories necessary to ensure ongoing functionality of their SNP genotyping systems. As a result of the closure and related re-focus of this business, we recorded a one-time charge of approximately \$10.8 million

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consisting of: severance and other costs of \$2.7 million, and non-cash write offs of facilities and equipment and other assets of \$4.7 million and of intangible assets, including developed technology and goodwill of \$3.2 million.

**Other Income (Expense)**

Other expense was \$4.3 million in 2002 compared to other income of \$2.8 million in 2001. This increase in expense was mainly due to increased interest expense and losses on foreign currency transactions, along with lower interest income, research and development grant income and miscellaneous income.

Interest expense increased to \$2.6 million in 2002 compared to \$991,000 in 2001. Interest costs increased primarily as a result of our additional long-term borrowings related to new facility construction and were partially offset in 2001 by the capitalization of interest related to the new German and U.S. facility construction in accordance with Financial Accounting Standard No. 34.

We recorded a loss from foreign currency transactions of \$2.2 million in 2002 as compared to a gain of \$31,000 in 2001. The loss from foreign currency transactions reflects net effects from conducting business in currencies other than the U.S. dollar. QIAGEN N.V.'s functional currency is the U.S. dollar and our subsidiaries' functional currencies are the European Union euro, the British pound, the Swiss franc, the U.S. dollar, the Australian dollar, the Canadian dollar, and the Japanese yen. The increase in 2002 over 2001 is primarily from a loss in the second quarter of 2002 due to unsettled intercompany balances with QIAGEN Sciences, which began operations during the second quarter. See "Currency Fluctuations" under Item 11 "Quantitative and Qualitative Disclosures About Market Risk".

For the year ended December 31, 2002, interest income decreased to \$1.2 million from \$1.8 million in the same period of 2001. Interest income is derived mainly from our investment of funds in investment grade, interest-bearing marketable securities. As of December 31, 2002, we had approximately \$11.5 million invested in such securities. The weighted average interest rates on the marketable securities portfolio ranged from 1.93% to 2.22% in 2002, compared to 4.48% to 5.75% in 2001.

In 2002, research and development grant income from European as well as German state and federal government grants decreased to \$801,000 from \$1.5 million in 2001. We conduct significant research and development activities in Germany, and expect to continue to apply for such research and development grants in the future.

We had miscellaneous expense of \$247,000 in 2002 compared to miscellaneous income of \$1.9 million in 2001. The higher income of 2001 was primarily due to the approximate \$1.4 million gain on the sale of a financial asset in the second quarter of 2001.

In 2002, we recorded net losses from an equity method investee of \$1.3 million compared to \$1.4 million in 2001. The 2002 loss represents our share of losses from our equity investment in PreAnalytiX. The first product of PreAnalytiX, the PAXgene Blood RNA System was launched in April 2001. In August 2002, PreAnalytiX announced that they have been successful in forming agreements with pharmaceutical companies including GlaxoSmithKline for the use of the PreAnalytiX system. It is expected that PreAnalytiX will launch further products in 2003. We sell certain products directly as joint venture products and certain products are sold via protocols. The joint venture entity itself, PreAnalytiX GmbH, is expected to report net losses for our fiscal year 2003. As previously disclosed, we intend to continue to make strategic investments in complementary businesses as the opportunities arise. Accordingly, we may continue to record losses on equity investments in start-up companies based on our ownership interest in such companies.

**Provision for Income Taxes**

Our effective tax rate increased to 41% in 2002 from 39% in 2001. Our operating subsidiaries are exposed to effective tax rates ranging from approximately 8% to approximately 42%. Fluctuation in the distribution of pre-tax income among these entities can lead to fluctuations of the effective tax rate in our consolidated financial statements. Further, the increase is partially due to the lack of a tax benefit associated with the costs related to recent acquisitions, including in process research and development and the current year expense of developed technology acquired during the year. Further, the impairment charges of goodwill and intangibles recorded in connection with the closure of QIAGEN Genomics did not have a tax benefit. Without the acquisition and closure costs in 2002, our effective tax rate would have been 37%.

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### **Minority Interest**

The minority interest expense of \$5,000 represents the minority position of Particles Solutions A.S., which is 60%, owned by GenoVision A.S. We acquired GenoVision A.S. on June 14, 2002.

Previously, we had a 60 percent interest in our Japanese subsidiary, QIAGEN K.K. We acquired the minority shareholders' interest in QIAGEN K.K. during the first quarter of 2001. The minority interest in income of \$8,000 in 2001 represents the last month of the minority interest's share in income at QIAGEN K.K.

### ***Fiscal Year Ended December 31, 2001 compared to 2000***

#### **Net Sales**

Net sales in 2001 increased 22% to \$263.8 million from \$216.8 million in the same period of 2000. Net sales in the United States increased 22% (or \$25.2 million) to \$142.4 million in 2001 from \$117.2 million in 2000, and net sales outside the United States increased 22% (or \$21.8 million) to \$121.4 million in 2001 from \$99.6 million in 2000. Net sales within and outside of the United States increased principally due to increased unit sales of consumable and instrumentation products to existing and new customers. Unit sales increases were attributable to focused marketing efforts and a sales force that continues to actively identify and service customer needs.

The increase within the United States was primarily attributable to net sales at QIAGEN, Inc., located in Valencia, California and QIAGEN Operon, Inc. (Operon) located in Alameda, California. QIAGEN, Inc. reported an increase of 18% (or \$16.9 million) in 2001 over 2000 and Operon reported an increase of 31% (or \$6.3 million). Outside of the United States, the increase in net sales was primarily due to growth at QIAGEN GmbH, located in Germany, which reported an increase in net sales of 42% (or \$12.2 million), QIAGEN Ltd, located in England, which reported an increase of 36% (or \$4.3 million) and QIAGEN K.K., located in Japan, which reported an increase of 26% (or \$4.9 million) for 2001 compared to 2000, offset by a decrease of 12% (or \$1.1 million) which was recorded by QIAGEN Instruments AG, located in Switzerland. The decrease of sales at QIAGEN Instruments reflected a shift in sales strategy, which resulted in a reduction of net sales by QIAGEN Instruments to OEM clients. This reduction was more than offset by increased intercompany sales to other QIAGEN companies for further resale of the instruments as QIAGEN-branded products.

Changes in exchange rates continued to affect the growth rate of net sales. A significant portion of our revenue is denominated in European Union euros. Using identical foreign exchange rates for both periods, net sales in 2001 would have increased approximately 25% (or \$54.5 million), as compared to the reported increase of 22% (or \$47.0 million). See Currency Fluctuations.

#### **Gross Profit**



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Gross profit was \$184.1 million or 70% of net sales in 2001 as compared to \$151.4 million or 70% of net sales in 2000. The absolute dollar increase is attributable to the increase in net sales. Our separation and purification consumable products carry a higher gross profit than many of our other products, such as instrumentation and synthetic nucleic acid products. Fluctuations in the product mix can lead to fluctuations in gross profit.

### **Research and Development**

Research and development expenses increased 15% to \$26.8 million (10% of net sales) in 2001 compared with \$23.4 million (11% of net sales) in 2000. We have a strong commitment to research and development, as demonstrated by the recent expansion of the German research facility along with the new U.S. facility, and anticipate that absolute research and development expenses will continue to increase significantly.

### **Sales and Marketing**

Sales and marketing expenses increased 18% to \$64.8 million (25% of net sales) in 2001 from \$54.9 million (25% of net sales) in 2000. The increase in sales and marketing expenses reflects our continued expansion of our sales force and advertising efforts in connection with the sale of our existing products and the introduction of new products. Such efforts contributed to the growth in net sales in 2001. Increased sales and marketing costs were primarily associated with personnel, commissions, advertising, publications, freight and logistics expenses and other promotional items. During 2001, we increased our sales force by approximately 30%. Sales and marketing expenses attributed to QIAGEN Operon GmbH, QIAGEN S.p.A. and QIAGEN Genomics, Inc. totaled \$3.5 million in 2001.

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compared to \$1.1 million in 2000. We anticipate that selling and marketing costs will continue to increase along with new product introductions and continued growth in our product sales.

## **General and Administrative**

General and administrative expenses increased 16% to \$36.0 million (14% of net sales) in 2001 from \$31.2 million (14% of net sales) in 2000. General and administrative expenses attributed to our principal production and manufacturing operations at QIAGEN GmbH, QIAGEN Instruments AG, Operon, and QIAGEN Sciences, Inc. (our newest U.S. facility), totaled \$20.3 million in 2001 compared to \$13.9 million in 2000. Additionally, during the year, the allowance for doubtful accounts was increased in line with the increases in sales and accounts receivable. Further, during 2001 QIAGEN Instruments (acquired in 1998) and Operon (acquired in 2000) began to apply policies in evaluating the adequacy of their allowance for doubtful accounts that are more consistent with our overall historic valuation policies, and their allowances for doubtful accounts were increased accordingly. In 2001, the allowance for doubtful accounts was increased by approximately \$1.4 million. The increase in general and administrative expenses was partially offset by the reversal of a retirement allowance at Sawady of approximately \$2.0 million that is no longer a liability of the subsidiary.

## **Acquisition and Related Costs**

On March 31, 2001, we acquired the Sawady Group of companies located in Tokyo, Japan. Acquisition and related charges were approximately \$3.0 million, which include approximately \$1.0 million of direct transaction costs, (primarily legal and other professional fees) and approximately \$2.0 million primarily relating to the relocation, closure and elimination of leased facilities, such as duplicate field offices.

## **Other Income (Expense)**

Other income was \$2.8 million in 2001 compared to \$2.6 million in 2000. This increase was mainly due to decreased interest expense, increased income from research and development grants, and a gain on foreign currency transactions, partially offset by decreased interest income and a higher loss on equity method investee.

Interest expense decreased to \$991,000 in 2001 compared to \$1.6 million in 2000. This decrease is due to the capitalization of interest related to the new German and U.S. facility construction in accordance with Financial Accounting Standard No. 34. For the year ended December 31, 2001, approximately \$2.2 million of interest cost was capitalized. There was no capitalized interest in 2000. Actual interest costs increased primarily as a result of our additional long-term borrowings related to the new facility construction.

In the 2001, research and development grant income from European as well as German state and federal government grants increased to \$1.5 million from \$1.2 million in 2000. We conduct significant research and development activities in Germany, and expect to continue to apply for such research and development grants in the future.

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Gain/loss on foreign currency transactions was a gain of \$31,000 in 2001 and a loss of \$231,000 in 2000. Income from foreign currency transactions reflects net effects from conducting business in currencies other than the U.S. dollar. Our functional currency is the U.S. dollar and our subsidiaries' functional currencies are the European Union euro, the British pound, the Swiss franc, the U.S. dollar, the Australian dollar, the Canadian dollar, and the Japanese yen. See Currency Fluctuations.

In 2001, interest income decreased to \$1.8 million from \$3.0 million in 2000. Interest income is derived mainly from our investment of funds in investment grade, interest-bearing marketable securities. As of December 31, 2001, we had approximately \$22.5 million invested in such securities compared to \$37.3 million at December 31, 2000. The weighted average interest rates on our marketable securities portfolio ranged from 4.48% to 5.75% in 2001, compared to 5.75% to 6.78% in 2000.

In 2001, we recorded net losses from equity method investees of \$1.4 million compared to \$870,000 in 2000. We had two equity investments at December 31, 2001. One of these investments, PreAnalytiX, launched its first product, the PAXgene Blood RNA System, in April 2001. The PAXgene Blood RNA System is intended to minimize the chronic problems associated with preanalytical process variability and to eliminate much of the unpredictability that has been a critical limitation in RNA analysis. As previously disclosed, we intend to continue to make strategic investments in complementary businesses as the opportunities arise. Accordingly, we may continue to record losses on equity investments in start-up companies based on our ownership interest in such companies.

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Other miscellaneous income increased to income of \$1.9 million in 2001 from \$1.1 million in 2000, primarily due to the approximate \$1.3 million net gain on the sales of marketable securities in 2001.

**Provision for Income Taxes**

Our effective tax rate decreased to 39% in 2001 from 46% in 2000. Our operating subsidiaries are exposed to effective tax rates ranging from approximately 8% to approximately 50%. The decrease is due to the lack of a tax benefit associated with the acquisition costs in 2000. Without the acquisition costs in 2000, our effective tax rate would have been 41%. Further, fluctuation in the distribution of pre-tax income among the subsidiaries can lead to fluctuations of the effective tax rate in our consolidated financial statements.

**Minority Interest**

Previously, we had a 60% interest in our Japanese subsidiary, QIAGEN K.K., and a 50% interest in Rosys Instruments, Inc. (Rosys Inc.), a subsidiary of our wholly owned subsidiary QIAGEN Instruments AG. QIAGEN Instruments AG sold its interest in Rosys, Inc. in June 2000, and we acquired the minority shareholders' interest in QIAGEN K.K. during the first quarter of 2001. The financial position and results of operations of these subsidiaries are included in our consolidated financial statements for the applicable periods.

***Liquidity and Capital Resources***

To date, we have funded our business primarily through internally generated funds, debt and the private and public sales of equity. As of December 31, 2002 and December 31, 2001, we had cash and cash equivalents of \$44.9 million and \$56.5 million, respectively, and investments in current marketable securities of \$11.5 million and \$22.5 million, respectively. Cash and cash equivalents are primarily held in U.S. dollars, other than those cash balances maintained in the local currency of the subsidiary to meet local working capital needs. At December 31, 2002, cash and cash equivalents had decreased to \$44.9 million from \$56.5 million at December 31, 2001 primarily due to cash used in investing activities of \$64.8 million, offset by cash provided by operations of \$36.7 million and cash provided by financing activities of \$6.1 million. Marketable securities consist of investments in high-grade corporate securities. At December 31, 2002, current marketable securities had decreased to \$11.5 million from \$22.5 million due to the sale of certain securities, mostly in the second and third quarters of 2002. The proceeds (\$11.0 million) were used primarily in financing the acquisition of GenoVision A.S. As of December 31, 2002 and December 31, 2001, we had working capital of \$111.6 million and \$119.4 million, respectively.

For the years ended December 31, 2002 and 2001, we generated net cash from operating activities of \$36.7 million and \$58.1 million, respectively. Cash provided by operating activities decreased in the year ended December 31, 2002 compared to the same period in 2001 primarily due to lower net income, higher increases in inventories and a reclass of tax benefit related to vested stock options, and a decrease in the tax benefit on non-qualified stock options, offset partially by increases in depreciation and amortization, deferred income taxes and income taxes payable. Inventories increased to \$56.1 million at December 31, 2002 from \$31.9 million at December 31, 2001 due to currency impacts, declining sales growth, purchase commitments and fixed production schedules. The change in exchange rates resulted in a \$5.5 million increase in inventory and higher instrumentation inventories (approximately \$8.4 million increase over 2001) were mostly as a result of new instrumentation product introductions and purchase commitments. Consumable inventories also increased at QIAGEN Sciences, Inc, which began manufacturing and warehousing activities in 2002. During the second quarter of 2002, QIAGEN, Inc., located in Valencia, California, transferred all consumable inventories to QIAGEN Sciences in Germantown, Maryland. In total, these consumable inventories increased \$3.9

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million in 2002. Further, the increase in inventory includes the acquisition of GenoVision A.S. in June 2002, which added approximately \$1.5 million in inventory at December 31, 2002. The tax benefit on non-qualified stock options decreased to \$1.6 million at December 31, 2002 from \$14.8 million at December 31, 2001 due to fewer stock option exercises as a result of a lower stock price during the year ended December 31, 2002. Since we rely heavily on cash generated from operating activities to fund our business, a decrease in demand for our products or significant technological advances of competitors would have a negative impact on our liquidity.

Approximately \$64.8 million of cash was used in investing activities during 2002, compared to \$90.8 million for the same period of 2001. Investing activities during the year ended December 31, 2002 consisted principally of the purchases of property and equipment in connection with the expansion of our production operations, and cash paid for acquisitions. During the second quarter we acquired GenoVision A.S. for total consideration of approximately \$28.1 million, of which \$13.5 million was in cash. Cash used in investing activities was partially offset by proceeds from the sale of marketable securities. As these capital investment programs are nearing completion, we believe that the cash flow required for investing will be substantially lower in 2003.

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Financing activities provided \$6.1 million in cash during 2002, compared to \$66.2 million provided in 2001. Cash provided during the year was primarily the result of proceeds from long-term debt along with proceeds from the issuance of common shares as a result of stock option exercises. These proceeds were partially offset by repayments of borrowings and capital lease payments.

We have credit lines totaling \$7.7 million at variable interest rates of which approximately \$935,000 was utilized as of December 31, 2002. In addition, as of December 31, 2002 we had capital lease obligations in the amount of \$12.1 million. The Company also carries \$97.1 million of long-term debt that consists mainly of three notes payable, two of which are at variable rates due in one payment in July 2005 totaling approximately \$88.4 million, and one note at a fixed rate of 3.75% due in semi-annual payments through March 2009 of EUR 639,000.

In May 2001, we obtained two new loan facilities from a group of banks led by Deutsche Bank (one EUR denominated, one USD denominated) totaling approximately \$92.5 million at December 31, 2002, each with an initial term of two years. In July 2002, the facilities were revised and now require repayment in July 2005. The primary intended use of the proceeds from these facilities is the refinancing of previously made acquisitions of land and the construction of manufacturing, research and administrative facilities at these sites. At December 31, 2002, approximately \$88.4 million had been drawn against these facilities, and is included in long-term debt.

During 2002, we substantially completed the construction of two new facilities in Germany. The total estimated cost for these facilities is approximately EUR 55.3 million (approximately \$58.0 million at December 31, 2002) of which EUR 54.6 million (approximately \$57.3 million) has been incurred. Cash flows from operations and bank loans will continue to fund the estimated costs to complete these projects.

Future contractual cash obligations resulting from long-term debt, capital leases and operating leases, and other commitments are as follows:

| Contractual obligations                   |                   |                  |                 |                  |                 |                 |                  |
|---|-------------------|------------------|-----------------|------------------|-----------------|-----------------|------------------|
| (in thousands)                            | Total             | 2003             | 2004            | 2005             | 2006            | 2007            | Thereafter       |
| Long-term debt                            | \$ 97,073         | \$ 1,340         | \$ 1,340        | \$ 89,702        | \$ 1,340        | \$ 1,340        | \$ 2,011         |
| Capital lease obligations                 | 18,211            | 1,697            | 1,491           | 1,349            | 1,095           | 1,049           | 11,530           |
| Operating leases                          | 12,608            | 5,862            | 4,038           | 1,631            | 203             | 149             | 725              |
| Other                                     | 4,526             | 4,526            |                 |                  |                 |                 |                  |
| <b>Total contractual cash obligations</b> | <b>\$ 132,418</b> | <b>\$ 13,425</b> | <b>\$ 6,869</b> | <b>\$ 92,682</b> | <b>\$ 2,638</b> | <b>\$ 2,538</b> | <b>\$ 14,266</b> |

Additional commercial commitments including lines of credit and purchase commitments are as follows:

| Other commercial commitments |        |        |      |      |      |      |            |
|------------------------------|--------|--------|------|------|------|------|------------|
| (in thousands)               | Total  | 2003   | 2004 | 2005 | 2006 | 2007 | Thereafter |
| Lines of credit              | \$ 935 | \$ 935 | \$   | \$   | \$   | \$   | \$         |

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|                              |           |           |          |        |    |    |    |
|------------------------------|-----------|-----------|----------|--------|----|----|----|
| Other commercial commitments | 26,434    | 16,764    | 9,270    | 400    |    |    |    |
| Total commercial commitments | \$ 27,369 | \$ 17,699 | \$ 9,270 | \$ 400 | \$ | \$ | \$ |

We believe that funds from operations, together with the proceeds from our public and private sales of equity, and availability of financing facilities as needed, will be sufficient to fund our planned operations and expansion during the coming year.

Our functional currencies and our subsidiaries are generally the respective local currencies in accordance with Statement of Financial Accounting Standard No. 52, Foreign Currency Translation. All amounts in the financial statements of entities whose functional currency is not the dollar are translated into dollar equivalents at exchange rates as follows: (1) assets and liabilities at period-end rates, (2) income statement accounts at average exchange rates for the period, and (3) components of shareholders' equity at historical rates. Translation gains or losses are recorded in shareholders' equity and transaction gains and losses are reflected in net income. The net gain or loss on foreign currency transactions was a loss of \$2.2 million in 2002, a gain of \$31,000 in 2001, and a loss of \$231,000 in 2000, and is included in other income.

**Table of Contents****Item 6. Directors, Senior Management and Employees**

Supervisory Directors and Managing Directors are appointed annually for the period beginning on the date following the Annual General Meeting up to and including the date of the Annual General Meeting held in the following fiscal year. Our Supervisory Directors, Managing Directors and executive officers, and their ages as of February 3, 2003, are as follows:

| <u>Name</u>                    | <u>Age</u> | <u>Position</u>  |
|--------------------------------|------------|--|
| Dr. Metin Colpan               | 48         | Managing Director, Chief Executive Officer                     |
| Peer M. Schatz                 | 37         | Managing Director, Chief Financial Officer                     |
| Prof. Dr. Detlev H. Riesner(1) | 61         | Chairman of the Supervisory Board, Supervisory Director        |
| Jochen Walter(2)               | 55         | Supervisory Director   |
| Dr. Franz A. Wirtz(1)          | 70         | Supervisory Director   |
| Erik Hornnaess(2)              | 65         | Supervisory Director   |
| Dr. Heinrich Hornef (2)        | 71         | Deputy Chairman of the Supervisory Board, Supervisory Director |
| Prof. Dr. Manfred Karobath     | 62         | Supervisory Director   |

Prof. Dr. jur Carsten P. Claussen was appointed as non-voting Special Advisor to the Supervisory Board and Honorary Chairman in 1999.

- (1) Member of the Compensation Committee.  
(2) Member of the Audit Committee.

We have entered into the following employment contracts with our Managing Directors:

Managing Director Agreement by and between DIAGEN Institute for Molecular Biological Diagnostics GmbH. and Dr. Metin Colpan, dated August 30, 1985, as amended

Employment Agreement by and between DIAGEN Institute for Molecular Biological Diagnostics GmbH. and Mr. Peer M. Schatz, dated February 24, 1993, as amended

Employment Agreement by and between QIAGEN AG and Peer M. Schatz, dated May 29, 1998

Employment Agreement between QIAGEN N.V. and Metin Colpan, dated October 5, 2000, as amended

Employment Agreement between QIAGEN N.V. and Peer M. Schatz, dated October 5, 2000, as amended

We have not entered into contracts with any member of the Supervisory Board that provide for benefits upon a termination of the employment of service of the member. We have entered into agreements with our Managing Directors that provide for benefits in the event of a Change of Control. The members of the Supervisory and Managing Boards do hold stock options. The vesting and exercisability of certain of these options will be accelerated in the event of a Change of Control, as discussed under Stock Option Plan below.



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The following is a brief summary of the background of each of the Supervisory Directors, the Managing Directors and the Honorary Chairman. Supervisory Directors and Managing Directors are appointed annually for the period beginning on the day following the Annual General Meeting up to and including the date of the Annual General Meeting held in the following fiscal year.

**Dr. Metin Colpan** is a co-founder of the Company and has been Chief Executive Officer and a Managing Director since 1985. Dr. Colpan obtained his Ph.D. and M.Sc. in Organic Chemistry and Chemical Engineering from the Darmstadt Institute of Technology in 1983. Prior to founding QIAGEN, Dr. Colpan was an Assistant Investigator at the Institute for Biophysics at the University of Düsseldorf. Dr. Colpan has had wide experience in separation techniques and in the separation and purification of nucleic acids in particular, and has filed many patents in the field. Dr. Colpan currently serves as a supervisory board member of GPC Biotech AG and Ingenium Pharmaceuticals AG, each in Munich, Germany.

**Peer M. Schatz** joined the Company as Chief Financial Officer in 1993 and became a Managing Director in 1998. Mr. Schatz was previously a partner in a private management buyout group in Switzerland and worked in finance and systems positions in Sandoz, Ltd. and Computerland AG as well as in finance, operations, management and sales positions in various start-up companies in the computer and software trading industry in Europe and the United States. Mr. Schatz graduated from the University of St. Gall, Switzerland, with a Master's degree in Finance in 1989 and obtained an M.B.A. in Finance from the University of Chicago Graduate School of Business in 1991. Mr. Schatz also serves in the capacities of Vice Chairman, Audit Committee Chairman and Compensation Committee member to Evotec OAI AG and as director to Mulligan BioCapital AG and is a member of the Advisory Board (Börsenrat) of the Frankfurt Stock Exchange.

**Professor Dr. Detlev H. Riesner** is a co-founder of QIAGEN. He has been on the Company's Supervisory Board since 1984 and was appointed Chairman of the Supervisory Board in 1999. Professor Riesner has held the Chair of Biophysics at the Heinrich-Heine-University in Düsseldorf since 1980. In 1996, he was also appointed to the position of Vice President of Research, and in 1999, he was nominated Director of Technology at the University of Düsseldorf. Prior to that he was Professor of Biophysical Chemistry at the Darmstadt Institute of Technology and, from 1975 to 1977, Lecturer of Biophysical Chemistry at Hannover Medical School. He has held guest professorships at the Institute of Microbiology, Academia Sinica, Beijing, and the Department of Neurology at the University of California, San Francisco. He received his M.S. in Physics from Hannover Institute of Technology and his Ph.D. from the University of Braunschweig, with post-graduate work at Princeton University. Professor Riesner is also either a

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member of the supervisory board or a director of New Lab Bioquality AG, Erkrath; Kourion AG, Düsseldorf; Neuraxo GmbH, Düsseldorf; and LSA Life Science Agency, GmbH.

**Jochen Walter** joined the Supervisory Board of QIAGEN in 1988 and has served on the Audit Committee since 1996. Since 1985, Mr. Walter has been the Managing Director of RBS GmbH (previously called Innovatives Düsseldorf), a venture capital company, which was the management company for S-Kapitalbeteiligungsgesellschaft Düsseldorf, mbH. Since 1968, he has been involved in a wide range of management positions in commercial banking. Mr. Walter holds a diploma in banking management from the Banking Institute in Bonn. Mr. Walter currently serves in the capacities of supervisory board member of NETEC AG and RBB Management AG. He has also served in the capacities of supervisory board member of Rhein Biotech N.V., TRAPO AG, Martel GmbH, Isotopen-Technik Dr. Sauerwein GmbH, and Sauerweinsystem-Technik GmbH; advisory board member of RBB Regionale Beteiligungs-u. Beratungsgesellschaft der Sparkassen, der Oberlausitz/Niederschlesien u. der Saechsischen Schweiz mbH; management board member of BVK Bundesverband Deutscher Kapitalbeiligungsgesellschaften-German Venture Capital Association e.V.; and management director and general manager of S-Kapitalbeteiligungsgesellschaft Düsseldorf, mbH.

**Dr. Franz A. Wirtz** has been a member of QIAGEN's Supervisory Board since 1989. Dr. Wirtz was Managing Director of Grünenthal GmbH, Aachen/Germany, a large, private pharmaceutical company from 1962-1997 and a member of its Advisory Board from 1998-2001. He is Chairman of Paion GmbH, Stolberg and Vice Chairman of Dasgip AG, Jülich, two young German biotech companies. For 10 years Dr. Wirtz was treasurer of the German pharmaceutical industry association. Dr. Wirtz holds the doctorate degree in chemistry from the Rheinisch-Westfälische Technische Hochschule in Aachen whose honorary citizen he became in 2001.

**Erik Hornnaess** has been a member of the Supervisory Board since 1998 and joined the Audit Committee in 2002. Mr. Hornnaess worked for Astra Pharmaceuticals, Sweden from 1965 until 1979 in various management positions in Sweden, Australia, and Canada and, for the last three years of this period, as the General Manager for the Benelux region (Belgium, The Netherlands and Luxembourg). In 1979, he joined Abbott Laboratories European Headquarters in Paris, France and from 1982 he was the Area Vice-President of Abbott Diagnostic Division in Europe, Middle-East and Africa, with headquarters in Wiesbaden, Germany. Mr. Hornnaess retired from Abbott Laboratories on March 1, 1997 and currently serves as non-executive Director of Alpharma (ALO), New Jersey, AXIS-SHIELDS Group, Scotland, RADIOMETER A/S, Denmark, EPICEPT INC., New Jersey, and MEDITRON A/S, Norway. He also serves on the advisory board of TVM (Techno Venture Management), Munich. Additionally, Mr. Hornnaess served as the Vice-President of European Diagnostic Manufacturers Association (EDMA), Brussels in the period 1995 through 1997. Mr. Hornnaess graduated from Aarhus Handelshøjskole, Denmark with an M.B.A. and obtained a PMD from the Harvard Business School.

**Dr. Heinrich Hornef** has been on the Company's Supervisory Board since 2000 and was appointed Deputy Chairman of the Supervisory Board and Audit Committee Chairman in 2001. He is chairman of the supervisory board of the pharmaceutical company Merck KGaA as well as a member of the partners' counsel of E. Merck, both in Darmstadt, Germany. He also serves as chairman on the board of Heidelberg Innovation GmbH, a biotechnology and life-science venture capital company in Heidelberg, Germany as chairman of the advisory board of mñphasys GmbH, Tuebingen, and as a member of the Beirat of Deutsche Bank AG. Prior to his retirement in December 1996, Dr. Hornef served as CFO of Boehringer Mannheim GmbH (1973-1991), as CFO of the Berlin-based Treuhandanstalt, the privatization agency in East-Germany (1992-1994), and as president of its successor-organisation BvS (1995-1996).

**Professor Dr. Manfred Karobath** studied medicine and worked from 1967 to 1980; first, in the Dept. of Biochemistry of the University of Vienna and, after a stage as postdoctoral fellow, he joined the Dept. of Psychiatry where he became professor of biological Psychiatry. In 1980, he joined Sandoz Pharma in Basel, first, in drug discovery, and later, he became Senior Vice President and head of R&D, Switzerland. In 1992, Prof. Dr. Karobath joined Rhone Poulenc Rorer ( RPR ) as President of R&D and Executive Vice President and later he became a member of the Boards of Directors of RPR, Pasteur Mérieux Connaught, Centeon and Rhone Poulenc Pharma. He has received several scientific awards and has published 92 scientific papers. Dr. Karobath also serves as an executive board member of Coley Pharmaceutical Group, as chairman and executive board member of IDEA AG and as board member of CARDION AG.

*Professor Dr. jur. Carsten P. Claussen* was Chairman of the Supervisory Board of the Company from 1988 to June 1999 and was appointed as a Special Advisor and Honorary Chairman in 1999. This position is not required by Dutch law and Professor Claussen is no longer a voting member of the Supervisory Board. For many years he has pursued a career in private banking. Between 1976 and 1987, Professor Claussen was a member of the Executive Board of Norddeutsche Landsbank, Hannover, and Chairman of the Hannover Stock Exchange. Since 1987, he has been a lawyer in Duesseldorf and senior advisor to IKB Deutsche Industriegreditbank, Düsseldorf. At

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present, he is a partner in the law firm of Hoffmann Liebs and Partner and specializes in corporate law and capital market transactions. He is Chairman of the Board of TON ART AG, Duesseldorf; Flossbach & v. Storch Vermögensmanagement AG, Cologne; Co.don AG, Teltow and WAS Worldwide Analytical Systems AG, Cleve and is a member of other boards. Professor Claussen received his Ph.D. in law from the University of Cologne.

## **Audit Committee**

The Audit Committee operates pursuant to a charter approved by the Supervisory Board and consists of three members, Dr. Hornef (Chairman), Mr. Walter, and Mr. Hornaess, and meets at least quarterly. The Audit Committee members are appointed by the Supervisory Board and serve for a term of one year. The Audit Committee recommends the selection of independent public accountants to audit the consolidated financial statements and local books and records of QIAGEN and its subsidiaries, along with pre-approving the fees for such services; reviews the performance of the independent public accountants with management, discussing on a quarterly basis the scope and results of the reviews and audits with the independent auditors; discusses our financial accounting and reporting principles and policies and the adequacy of our internal accounting, financial and operating controls and procedures with the independent public accountants and management; considers and approves any recommendations regarding changes to our accounting policies and processes; reviews with management and the independent public accountants our quarterly earnings reports prior to their release to the press; and reviews the quarterly and annual reports (reported on Forms 6-K and 20-F) to be filed with the Securities Exchange Commission and the Deutsche Borse. We believe that our Audit Committee meets the requirements as set forth by the Sarbanes-Oxley Act of 2002 as well as by Nasdaq.

## **Compensation Committee**

The Compensation Committee consists of two members: Professor Riesner (Chairman) and Dr. Wirtz. Members are appointed by the Supervisory Board and serve for a term of one year. The Compensation Committee reviews and approves all stock option grants, reviews and approves the annual salaries, bonuses and other benefits of executive officers, and reviews general policies relating to employee compensation and benefits.

## **Compensation of Directors and Officers**

The table below states amounts paid to Managing Directors and Supervisory Directors. In 2002, Management individually received \$388,000 in fixed compensation and \$48,000 in variable compensation. The variable component is based on the Managing Board member's performance relative to his personal goals and goals set by the Managing Board and/or the Supervisory Board. In addition, beginning in 2003, stock options granted to the Managing Board will require an appreciation of our share price compared to our stock price on the date of grant. We did not pay any agency or advisory service fees to members of the Supervisory Board. Other non-cash remuneration for Dr. Colpan was approximately \$14,000. Dr. Colpan has been granted a flat-rate disability and old-age pension amounting to approximately EUR 3,000 per month. The Company has obtained a key man life insurance policy on the life of Dr. Colpan in the amount of EUR 767,000. See Note 17 to the Consolidated Financial Statements for information relating to retirement benefits.

The compensation granted to Supervisory Board directors in 2002 consists of a fixed component (which is higher for audit committee members and the Vice Chairman and Chairman) and a variable component, which is based on Stock Options (see below).

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The following table sets forth the total compensation of our officers and directors including amounts paid and options granted in 2002:

| Name                        | Total Cash<br>Remuneration | 2002<br>Option Grants | Expiration Dates | Exercise Prices      |
|-----------------------------|----------------------------|-----------------------|------------------|----------------------|
| Dr. Metin Colpan            | \$ 436,000                 | 447,900               | 4/2012 to 9/2012 | \$ 4.590 to \$15.480 |
| Peer M. Schatz              | \$ 436,000                 | 450,000               | 4/2012 to 9/2012 | \$ 4.590 to \$15.480 |
| Prof. Dr. Detlev H. Riesner | \$ 20,000                  | 20,000                | 4/2012           | \$ 15.480            |
| Jochen Walter               | \$ 12,500                  | 20,000                | 4/2012           | \$ 15.480            |
| Dr. Franz A. Wirtz          | \$ 10,000                  | 20,000                | 4/2012           | \$ 15.480            |
| Erik Hornnaess              | \$ 10,000                  | 20,000                | 4/2012           | \$ 15.480            |
| Dr. Heinrich Hornef         | \$ 17,500                  | 20,000                | 4/2012           | \$ 15.480            |
| Prof. Dr. Manfred Karobath  | \$ 10,000                  | 20,000                | 4/2012           | \$ 15.480            |

The following table sets forth the vested and unvested options of our officers and directors as of February 3, 2003:

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| Name                        | Total Vested | Total Unvested | Expiration Dates | Exercise Prices       |
|-----------------------------|--------------|----------------|------------------|-----------------------|
|                             | Options      | Options (1)    |                  |                       |
| Dr. Metin Colpan            | 642,049      | 536,001        | 5/2006 to 9/2012 | \$ 1.188 to \$20.563  |
| Peer M. Schatz              | 294,049      | 538,101        | 5/2006 to 9/2012 | \$ 1.188 to \$20.563  |
| Prof. Dr. Detlev H. Riesner | 66,000       | 28,000         | 5/2006 to 4/2012 | \$ 1.188 to \$20.563  |
| Jochen Walter               | 16,000       | 25,334         | 1/2009 to 4/2012 | \$ 8.609 to \$20.563  |
| Dr. Franz A. Wirtz          | 54,666       | 25,334         | 5/2006 to 4/2012 | \$ 1.188 to \$20.563  |
| Erik Hornnaess              | 42,666       | 25,334         | 1/2008 to 4/2012 | \$ 5.625 to \$20.563  |
| Dr. Heinrich Hornef         | 10,666       | 25,334         | 1/2010 to 4/2012 | \$ 15.480 to \$20.563 |
| Prof. Dr. Manfred Karobath  | 10,666       | 25,334         | 1/2010 to 4/2012 | \$ 15.480 to \$20.563 |

(1) Includes 2002 option grants.

**Employees**

As of December 31, 2002, we employed 1,651 individuals, 17% of whom worked in research and development, 29% in sales, 32% in production/logistics, 7% in marketing and 15% in administration.

| Country           | Research and Development | Production/ |            |            |            | Administration | TOTAL |
|-------------------|--------------------------|-------------|------------|------------|------------|----------------|-------|
|                   |                          | Sales       | Logistics  | Marketing  |            |                |       |
| United States     | 21                       | 199         | 143        | 57         | 90         | <b>510</b>     |       |
| Germany           | 219                      | 134         | 305        | 48         | 105        | <b>811</b>     |       |
| Switzerland       | 29                       | 18          | 49         | 4          | 12         | <b>112</b>     |       |
| Canada            | 0                        | 12          | 0          | 0          | 2          | <b>14</b>      |       |
| United Kingdom    | 0                        | 37          | 0          | 4          | 4          | <b>45</b>      |       |
| France            | 0                        | 23          | 0          | 1          | 5          | <b>29</b>      |       |
| Australia         | 0                        | 12          | 0          | 0          | 4          | <b>16</b>      |       |
| Italy             | 0                        | 7           | 0          | 1          | 3          | <b>11</b>      |       |
| Japan             | 0                        | 39          | 28         | 6          | 9          | <b>82</b>      |       |
| Norway            | 10                       | 3           | 1          | 2          | 1          | <b>17</b>      |       |
| The Netherlands   | 0                        | 0           | 0          | 0          | 4          | <b>4</b>       |       |
| <b>12/31/2002</b> | <b>279</b>               | <b>484</b>  | <b>526</b> | <b>123</b> | <b>239</b> | <b>1,651</b>   |       |

At December 31, 2001 and 2000, we employed 1,557 and 1,315 individuals, respectively. None of our employees is represented by a labor union or is subject to a collective bargaining agreement. Management believes that its relations with its employees are good.

Our success depends, to a significant extent, on key members of our management and our scientific staff. The loss of such employees could have a material adverse effect on QIAGEN. Our ability to recruit and retain qualified skilled personnel to perform future research and development work will also be critical to our success. Due to the intense competition for experienced scientists from numerous pharmaceutical and biotechnology companies and academic and other research institutions, there can be no assurance that we will be able to attract and retain such personnel on acceptable terms. Our planned activities will also require additional personnel, including management, with expertise in areas such as manufacturing and marketing, and the development of such expertise by existing management personnel. The inability to acquire such

personnel or develop such expertise could have a material adverse impact on our operations.

**Table of Contents****Share Ownership**

The following table sets forth certain information as of February 3, 2003 concerning the ownership of Common Shares by each current member of the managing board and supervisory board. In preparing the following table, we have relied on information furnished by such persons.

| Name and Country of Residence          | Shares Beneficially Owned (1)<br>Number | Percent Ownership (2) |
|--|---|-----------------------|
| Prof. Dr. Detlev H. Riesner, Germany   | 3,328,038(3)                            | 2.29                  |
| Dr. Franz A. Wirtz, Germany            | 1,216,700(4)                            | *                     |
| Jochen Walter, Germany                 | 70,000(5)                               | *                     |
| Erik Hornnaess, Spain                  | 10,000(6)                               | *                     |
| Professor Dr. Manfred Karobath, France | 0(7)                                    | *                     |
| Dr. Heinrich Hornef, Germany           | 1,600(8)                                | *                     |
| Dr. Metin Colpan, Germany              | 6,000,000(9)                            | 4.12                  |
| Peer M. Schatz, Germany                | 1,971,576(10)                           | 1.35                  |

\* Indicates that the person beneficially owns less than 1% of the Common Shares issued and outstanding as of February 3, 2003.

- (1) The number of Common Shares issued and outstanding as of February 3, 2003 was 145,539,189. The persons and entities named in the table have sole voting and investment power with respect to all shares shown as beneficially owned by them and have the same voting rights with respect to Common Shares.
- (2) Does not include shares of Common Stock subject to options held by such persons at February 3, 2003 and exercisable within 60-days thereafter. See footnotes below for such information on options exercisable at February 3, 2003 and within 60-days thereafter.
- (3) Does not include 76,666 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$1.188 to \$20.500 per share. Options expire in increments during the period between May 2006 and January 2010. Prof. Riesner also has the option to purchase 377,302 common shares through Credit Suisse First Boston. Includes 2,950,736 shares are held by Riesner Verwaltungs GmbH, of which Professor Riesner is the sole stockholder.
- (4) Does not include 63,999 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$1.188 to \$20.500 per share. Options expire in increments during the period between May 2006 and January 2010.
- (5) Does not include 25,333 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$8.609 to \$20.500 per share. Options expire in increments during the period between January 2009 and January 2010.
- (6) Does not include 51,999 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$5.625 to \$20.500 per share. Options expire in increments during the period between January 2008 and January 2010.
- (7) Does not include 19,999 shares issuable upon the exercise of options to purchase Common Shares at an exercise price of \$20.500 per share. The options expire in January 2010.



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- (8) Does not include 19,999 shares issuable upon the exercise of options to purchase Common Shares at an exercise price of \$20.500 per share. The options expire in January 2010.

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- (9) Does not include 768,716 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$1.188 to \$20.500 per share. Options expire in increments during the period between May 2006 and January 2010. Includes 5,200,000 shares held by CC Verwaltungs GmbH, of which Dr. Colpan is the sole stockholder.
- (10) Does not include 420,716 shares issuable upon the exercise of options to purchase Common Shares at an exercise price ranging from \$1.188 to \$20.500 per share. Options expire in increments during the period between May 2006 and January 2010.

**Stock Option Plan**

In April 1996, the Supervisory Board adopted the QIAGEN N.V. 1996 Employee, Director and Consultant Stock Option Plan (the Option Plan), which was approved by our shareholders on June 3, 1996. Pursuant to the Option Plan, options to purchase our Common Shares may be granted to employees and consultants of QIAGEN and its subsidiaries and to supervisory directors. An aggregate of 18,968,000 Common Shares have been reserved for issuance pursuant to the Option Plan, subject to certain antidilution adjustments. Options granted pursuant to the Option Plan may either be incentive stock options within the meaning of Section 422 of the United States Internal Revenue Code of 1986, as amended (the Code), or non-qualified stock options. The Option Plan is administered by the Compensation Committee of the Supervisory Board (the Compensation Committee), which selects participants from among eligible employees, consultants and directors and determines the number of shares subject to the option, the length of time the option will remain outstanding, the manner and time of the option's exercise, the exercise price per share subject to the option and other terms and conditions of the option consistent with the Option Plan. The Compensation Committee's decisions are subject to the approval of the Supervisory Board. The vesting and exercisability of certain options will be accelerated in the event of a Change of Control. A Change of Control means the occurrence of a merger or consolidation of QIAGEN, whether or not approved by the Board of Directors, other than a merger or consolidation which would result in the voting securities of QIAGEN outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the parent of such corporation) at least 50% of the total voting power represented by the voting securities of QIAGEN or such surviving entity or parent of such corporation outstanding immediately after such merger or consolidation, or the stockholders of QIAGEN approve an agreement for the sale or disposition by QIAGEN of all or substantially all of QIAGEN's assets.

The Compensation Committee has the power, subject to Supervisory Board approval, to interpret the Option Plan and to adopt such rules and regulations (including the adoption of sub-plans applicable to participants in specified jurisdictions) as it may deem necessary or appropriate. The Compensation Committee or the Supervisory Board may at any time amend the Option Plan in any respect, subject to Supervisory Board approval, and except that (i) no amendment that would adversely affect the rights of any participant under any option previously granted may be made without such participant's consent and (ii) no amendment shall be effective prior to shareholder approval to the extent such approval is required to ensure favorable tax treatment for incentive stock options or to ensure compliance with Rule 16b-3 under the United States Securities Exchange Act of 1934, as amended (the Exchange Act) at such times as any participants are subject to Section 16 of the Exchange Act.

The following table sets forth the total amount of options to purchase Common Shares outstanding under the Option Plan, the expiration dates of such options, and the prices (in U.S. dollars) at which such options may be exercised, as of February 3, 2003. The exercise price of each of these options is the fair market value of the Common Shares as of the date of grant. Beginning in 2003, options granted to members of the Supervisory Board and the Managing Board carry a strike price that is higher than the market price at the time of grant. Generally, each of the options has a term of ten years, subject to earlier termination in the event of death, disability or other termination of employment. The outstanding options become exercisable in cumulative annual installments of 33 1/3 percent each, beginning on the first anniversary date of the grant. In connection with the acquisition of Operon Technologies, Inc., the Company exchanged 273,134 QIAGEN options for all of the outstanding options of Operon. These exchanged options vest over 4 years. As of February 3, 2003, options to purchase 2,366,000 Common Shares were held by the officers and directors of the Company, as a group.

Expiration

Exercise Price

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|                  | <u>Outstanding<br/>Options</u> | <u>Dates</u>     | <u>of Shares</u>   |
|------------------|--------------------------------|------------------|--------------------|
| 1996 Option Plan | 11,284,796                     | 9/2003 to 1/2013 | \$ 0.97 to \$49.75 |

**Table of Contents****Item 7. Major Shareholders and Related Party Transactions**

The following table sets forth certain information as of February 3, 2003, concerning the ownership of Common Shares of each holder of greater than five percent ownership.

| Name and Country of Residence                | Shares Beneficially Owned (1)<br>Number | Percent Ownership |
|--|---|-------------------|
| Alafi Capital Company, LLC United States (2) | 7,505,491(3)                            | 5.16%             |

- (1) The number of Common Shares issued and outstanding as of February 3, 2003 was 145,539,189. The persons and entities named in the table have sole voting and investment power with respect to all shares shown as beneficially owned by them and have the same voting rights with respect to Common Shares.
- (2) Moshe Alafi exercises investment, voting and dispositive power over the Common Shares held of record by Alafi Capital Company, LLC.
- (3) In reporting the beneficial ownership of shares by Alafi Capital Company, LLC, the Company has relied on information furnished by Alafi Capital Company, LLC.

**Control of Registrant**

To our knowledge, we are not owned or controlled by another corporation or by any foreign government. There are no persons known to us to be the beneficial owners of more than ten percent of the Common Shares as of February 3, 2003. As of February 3, 2003, the officers and directors of QIAGEN as a group beneficially owned approximately 12,598,000 Common Shares or 8.66% of the then outstanding Common Shares.

**Related Party Transactions**

During 2001, we entered into a securities lending arrangement with Deutsche Bank and transferred 20,000 Genome Pharmaceuticals Corporation AG (GPC) shares held by QIAGEN to Deutsche Bank in January 2002. We are restricted from selling the 20,000 shares during the lending period. We retain all other rights to the shares and Deutsche Bank guarantees the return of the shares after the lending period.

During 2002 and 2001, we had transactions with certain companies in which we also have an ownership interest, all of which are individually and in sum immaterial (under \$250,000 in sales) except for certain transactions with our joint venture, PreAnalytiX. The transactions are summarized as follows:

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|                     | as of or for the year ended<br>December 31, |              |
|---------------------|---|--------------|
|                     | 2002  | 2001         |
| Sales               | \$ 1,367,000                                | \$ 1,554,000 |
| Loan receivable     | \$ 4,048,000                                | \$ 1,808,000 |
| Accounts receivable | \$ 921,000                                  | \$ 444,000   |
| Accounts payable    | \$ 130,000                                  | \$ 9,000     |

To date, both joint venture partners each loaned CHF 5.6 million to the PreAnalytiX venture at a 4.0% interest rate. It is anticipated that both joint venture partners will convert the loan balances to additional capital at some future date.

In connection with its formation, QIAGEN K.K. entered into a service agreement with its minority shareholder. Pursuant to the agreement, the minority shareholder provided services such as stock keeping, order processing, and packing and shipping. As compensation for services provided, QIAGEN K.K. paid the minority shareholder a service fee equal to seven percent of the net revenues of QIAGEN K.K. For the year ended December 31, 2000, QIAGEN K.K. expensed to sales and marketing expense approximately \$1.1 million in service fees. The service agreement was terminated upon the Company's acquisition of the minority shareholder's interest in January 2001.

### **Item 8. Financial Information**

See Item 18.

### **Legal Proceedings**

We are not a party to any material litigation in any court, and management is not aware of any contemplated proceeding by any individual, company or government authority against us.

### **Statement of Dividend Policy**

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We have not paid any dividends on our Common Shares since our inception and do not intend to pay any dividends on our Common Shares in the foreseeable future. We intend to retain our earnings, if any, for the development of our business.

**Item 9. The Listing of QIAGEN's Common Shares**

We approved a four-for-one stock split during fiscal 2000 and a two-for-one stock split and par value currency conversion in fiscal 1999.

To effect the four-for-one stock split, on June 16, 2000, our shareholders approved the amendment of our Articles of Association to increase the number of authorized shares of common stock from 65 million to 260 million. Our Board of Supervisory Directors and Managing Board approved the split in May 2000. Common shareholders of record on July 3, 2000 received three additional shares for each share held on that date. The additional shares were distributed and the stock split was effective on July 13, 2000.

On June 18, 1999, our shareholders approved the amendment of our Articles of Association to increase the number of authorized shares of common stock from 32.5 million to 65 million, which was required to effect the two-for-one stock split that our Board of Supervisory Directors and Managing Board approved in May 1999. Common shareholders of record on July 2, 1999 received one additional share for each share held on that date. The additional shares were distributed and the stock split was effective on July 16, 1999.

Since June 27, 1996, our common shares have been quoted on the NASDAQ National Market under the symbol QGENF. The following table sets forth the annual high and low closing sale prices for the last five years, the quarterly high and low closing sale prices for the last two fiscal years, and the monthly high and low closing sale prices for the last six months of our common shares on the NASDAQ National Market. All share prices prior to July 13, 2000 have been restated to reflect the stock splits.

|               | High (\$) | Low (\$) |
|---------------|-----------|----------|
| <b>Annual</b> |           |          |
| 1998          | 9.500     | 5.234    |
| 1999          | 20.875    | 8.188    |
| 2000          | 57.375    | 18.813   |
| 2001          | 35.375    | 12.380   |
| 2002          | 20.810    | 4.510    |

|                        | High (\$) | Low (\$) |
|------------------------|-----------|----------|
| <b>Quarterly 2001:</b> |           |          |
| First Quarter          | 35.375    | 18.375   |
| Second Quarter         | 28.000    | 18.480   |
| Third Quarter          | 23.330    | 12.380   |
| Fourth Quarter         | 20.690    | 14.000   |

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|  | High (\$) | Low (\$) |
|--|-----------|----------|
| <b>Quarterly 2002:</b>                 |           |          |
| First Quarter                          | 20.810    | 14.000   |
| Second Quarter                         | 15.870    | 11.060   |
| Third Quarter                          | 10.560    | 4.590    |
| Fourth Quarter                         | 7.210     | 4.510    |
| <br>                                   |           |          |
| <b>2003:</b>                           |           |          |
| First Quarter (through March 21, 2003) | 6.200     | 5.340    |
| <br>                                   |           |          |
|  | High (\$) | Low (\$) |
| <b>Monthly:</b>                        |           |          |
| September 2002                         | 5.860     | 4.590    |
| October 2002                           | 7.210     | 4.510    |
| November 2002                          | 6.940     | 6.100    |
| December 2002                          | 6.820     | 5.110    |
| January 2003                           | 6.200     | 5.400    |
| February 2003                          | 5.840     | 5.340    |

Since September 25, 1997, our common shares have been traded officially on the Frankfurt Stock Exchange, Neuer Markt under the symbol QIA. The following table sets forth the annual high and low closing sale prices for the last five years, the quarterly high and low closing sale prices for the last two fiscal years, and the monthly high and low closing sale prices for the last six months of our common shares on the Neuer Markt. Prior to January 1, 1999 trades on the Neuer Markt were denominated in German marks. In connection with the adoption of

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the euro by Germany on January 1, 1999, trades on the Neuer Markt, as of January 1, 1999, are denominated in euros. The conversion rate between the German mark and the euro was fixed on January 1, 1999 at 1.95583 German marks per euro. Share prices prior to July 13, 2000 have been restated to reflect the stock splits.

|                 | <u>High (DM)</u>  | <u>Low (DM)</u>  |
|-----------------|-------------------|------------------|
| Annual          |                   |                  |
| 1998            | 17.200            | 9.138            |
|                 | <u>High (EUR)</u> | <u>Low (EUR)</u> |
| Annual          |                   |                  |
| 1999            | 20.750            | 7.125            |
| 2000            | 60.400            | 17.650           |
| 2001            | 38.250            | 13.600           |
| 2002            | 23.450            | 4.460            |
|                 | <u>High (EUR)</u> | <u>Low (EUR)</u> |
| Quarterly 2001: |                   |                  |
| First Quarter   | 38.250            | 19.250           |
| Second Quarter  | 31.200            | 21.050           |
| Third Quarter   | 27.900            | 13.600           |
| Fourth Quarter  | 23.800            | 16.200           |
|                 | <u>High (EUR)</u> | <u>Low (EUR)</u> |
| Quarterly 2002: |                   |                  |
| First Quarter   | 23.450            | 16.750           |
| Second Quarter  | 17.260            | 11.400           |
| Third Quarter   | 11.100            | 4.670            |
| Fourth Quarter  | 7.480             | 4.460            |
|                 | <u>High (EUR)</u> | <u>Low (EUR)</u> |
| Monthly:        |                   |                  |
| September 2002  | 6.150             | 4.670            |
| October 2002    | 7.480             | 4.460            |
| November 2002   | 6.760             | 6.050            |
| December 2002   | 6.930             | 4.850            |

As of January 1, 2003, trading in our shares was accepted on the Frankfurt Stock Exchange's new Prime Standard segment, introduced by the Frankfurt Stock Exchange in late 2002. As of January 1, 2003, the trading of our shares has transferred from the Neuer Markt segment of the Frankfurt Stock Exchange to the Prime Standard Segment. The Neuer Markt segment is expected to be discontinued in 2004. Our shares continue to be traded under the symbol QIA.

| 2003:                                  |                   |                  |
|--|-------------------|------------------|
| First Quarter (through March 21, 2003) | 5.770             | 4.930            |
|  | <u>High (EUR)</u> | <u>Low (EUR)</u> |



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|               |       |       |
|---------------|-------|-------|
| Monthly:      |       |       |
| January 2003  | 5.770 | 5.200 |
| February 2003 | 5.420 | 4.930 |

### **Item 10. Additional Information**

#### **Memorandum and Articles of Association**

We are registered in the commercial register of the Chamber of Commerce and Industries ( Kamer van Koophandel ), Limburg-Noord, under the entry number 12036979 . Set forth is a summary of certain provisions of our Articles of Association, as amended on July 3, 2000 (the Articles ) and Dutch law, where applicable. Such summary does not purport to be complete and is qualified in its entirety by reference to the Articles and such law.

#### **Our Objects**

Our objects are found in Article 2 of the Articles. Our objects include, without limitation, the performance of activities in the biotechnology industry, as well as incorporating, acquiring, participating in, financing, managing and having any other interest in companies or enterprises of any nature, raising and lending funds and such other acts as may be conducive to our business.

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### **Managing Directors**

QIAGEN shall be managed by a Managing Board consisting of one or more Managing Directors under the supervision of the Supervisory Board. Managing Directors shall be appointed by the general meeting upon the joint meeting of the Supervisory board and the Managing Board (the Joint Meeting ) having made a binding nomination for each vacancy. The majority view in Dutch law is that in managing QIAGEN, the Managing Directors must take into account our interests and our business and the interests of all stakeholders (which includes but is not limited to our shareholders). However, the general meeting may at all times overrule the binding nature of such a nomination by a resolution adopted by at least a two-thirds majority of the votes cast, if such majority represents more than half the issued share capital. This is different from the provisions of many American corporate statutes, including the Delaware General Corporation Law, which give the directors of a corporation greater authority in choosing the executive officers of a corporation. Under our Articles, the general meeting may suspend or dismiss a managing director at any time. The Supervisory Board shall also at all times be entitled to suspend (but not to dismiss) a Managing Director. The Articles provide that the Supervisory Board may adopt management rules governing the internal organization of the Managing Board. Furthermore, the Supervisory Board shall determine the salary, the bonus, if any, and the other terms and conditions of employment of the Managing Directors. Under Dutch law, in the event that there is a conflict of interest between a Managing Director and us, we are represented by the Supervisory Board.

### **Supervisory Directors**

The Supervisory Board shall be responsible for supervising the policy pursued by the Managing Board and our general course of affairs. Under our Articles, the supervisory directors are required to serve our interests and our business in fulfilling their duties. The Supervisory Board shall consist of such number of members as the Joint Meeting may from time to time determine, with a minimum of three members. The Supervisory Directors shall be appointed by the General Meeting upon the Joint Meeting having made a binding nomination for each vacancy. If during a financial year a vacancy occurs in the Supervisory Board, the Supervisory Board may appoint a Supervisory Director who will cease to hold office at the next Annual General Meeting. Under Dutch law, a Supervisory Director must excuse him or herself in the case of any conflict of interest. The Supervisory Board determines the compensation of the members of the Supervisory Board upon the recommendation of the compensation committee. Under our Articles, the General Meeting may suspend or dismiss a supervisory director at any time. This is different from the provisions of many American corporate statutes, including the Delaware General Corporation Law, which provides that directors may vote to fill vacancies in the board of directors of a corporation.

### **Liability of Managing Directors and Supervisory Directors**

Under Dutch law, as a general rule, Managing Directors are not liable for obligations we incur. Under certain circumstances, however, they may become liable, either towards QIAGEN (internal liability) or to others (external liability), although some exceptions are described below:

#### **Liability Towards QIAGEN**

Failure of a Managing or Supervisory Director to perform his or her duties does not automatically lead to liability. Liability is only incurred in case of a clear, indisputable shortcoming about which no reasonably judging business-person would have any doubt. In addition, the Managing or Supervisory Director must be deemed to have been grossly negligent. Managing Directors and Supervising Directors are jointly and severally liable for failure of the Managing Board and Supervisory Board as a whole, respectively, but an individual Managing or Supervisory Director

will not be held liable if he or she is determined not to have been responsible for the mismanagement and has not been negligent in preventing its consequences.

#### **Liability for Misrepresentation in Annual Accounts**

Managing and Supervisory Directors are also jointly and severally liable to any third party for damage suffered as a result of misrepresentation in the annual accounts, annual report or interim statements of QIAGEN, although a Managing or Supervisory Director will not be held liable if found not to be personally responsible for the misrepresentation. Moreover, a Managing or Supervisory Director may be found to be criminally liable if he deliberately publishes false annual accounts or deliberately allows the publication of such false annual accounts.

#### **Tort Liability**

Under Dutch law, there can be liability if one has committed a tort ( *onrechtmatige daad* ) against another person. Although there is no clear definition of *tort* under Dutch law, breach of a duty of care towards a third party is

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generally considered to be a tort. Therefore, a Dutch corporation may be held liable by any third party under the general rule of Dutch laws regarding tort claims. In exceptional cases, Managing Directors and Supervisory Directors have been found liable on the basis of tort under Dutch common law, but it is generally difficult to hold a Managing or Supervisory Director personally liable for a tort claim. Shareholders cannot base a tort claim on any losses which derive from and coincide with losses we suffered. In such cases, only we can sue the Managing or Supervisory Directors.

## **Criminal Liability**

Under Dutch law, if a legal entity has committed a criminal offence, criminal proceedings may be instituted against the legal entity itself as well as against those who gave order to or were in charge of the forbidden act. As a general rule, it is held that a Managing Director is only criminally liable if he played a reasonably active role in the criminal act.

## **Indemnification**

Article 27 of our Articles of Association provide that we shall indemnify every person who is or was a Managing Director or Supervisory Directors against all expenses (including attorneys' fees) judgments, fines and amounts paid in settlement with respect to any threatened pending or completed action, suit or proceeding as well as against expenses (including attorneys' fees) actually and reasonably incurred in connection with the defense or settlement of an action or proceeding, if such person acted in good faith and in a manner he reasonably could believe to be in or not opposed to our best interests. An exception is made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable for gross negligence or willful misconduct in the performance of his duty to us.

## **Classes of Shares**

The authorized classes of our shares consist of Common Shares, Financing Preference Shares and Preference Shares. No Financing Preference Shares or Preference Shares have been issued.

## **Common Shares**

Common Shares are issued in registered form only. Common Shares are available either without issue of a share certificate ( Type I shares ) or with issue of a share certificate ( Type II shares ), in either case in the form of an entry in the share register. The Type II shares are registered with American Stock Transfer & Trust Company, our transfer agent and registrar in New York (the New York Transfer Agent ). At the discretion of the Supervisory Board, Type I shares may be issued and will be registered with TMF Management B.V. in Amsterdam, The Netherlands.

The transfer of registered shares requires that we issue a written instrument of transfer and the written acknowledgment of such transfer (or, in the case of Type II shares, the New York Transfer Agent (in our name)), and surrender of the share certificates, if any, to us or (in our name) to the New York Transfer Agent. Upon surrender of a share certificate for the purpose of transfer of the relevant shares, we (or the New York Transfer Agent in our name) acknowledge the transfer by endorsement on the share certificate or by issuance of a new share certificate to the

transferee, at the discretion of the Managing Board.

### **Financing Preference Shares**

No Financing Preference Shares are outstanding. If issued, Financing Preference Shares will be issued in registered form only. No share certificates are issued for Financing Preference Shares. Financing Preference Shares must be fully paid up upon issue. The preferred dividend rights attached to Financing Preference Shares are described under "Dividends" below. We have no present plans to issue any such Financing Preference Shares.

### **Preference Shares**

No Preference Shares are outstanding. If issued, Preference Shares will be issued in registered form only. No share certificates are issued for Preference Shares. Only 25% of the par value thereof is required to be paid upon subscription for Preference Shares. The obligatory payable part of the nominal amount (call) must be equal for each Preference Share. The Managing Board may, subject to the approval of the Supervisory Board, resolve on which day and up to which amount a further call must be paid on Preference Shares which have not yet been paid up in full. The preferred dividend rights attached to Preference Shares are described under "Dividends" below. Pursuant to our Articles of Association and the resolution adopted by our general meeting on June 14, 2002, QIAGEN's Supervisory Board is entitled to resolve to issue Preference Shares. If our Supervisory Board opposes an intended take-over of

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our Company and Preference Shares are issued, the nature of the Preference Shares is such that the bidder may as a result withdraw its bid. Alternatively, the bidder could enter into negotiations with our Managing Board and/or Supervisory Board and agree on a higher offer price for our shares. There are currently no Preference Shares outstanding. Preference Shares may only be issued in the event that (I) in the opinion of the Supervisory Board, any person who did not acquire shares at our incorporation, shall, alone or pursuant to a mutual arrangement for co-operation jointly with one or more other persons, directly or indirectly, have acquired or given notice of an intent to acquire (beneficial) ownership of an amount of Common Shares or Financing Preference Shares, which in aggregate equals 20% or more of our share capital then outstanding in the form of Common Shares and Financing Preference Shares; (ii) the Supervisory Board shall declare any person to be an adverse person upon a determination that such person, alone or together with its affiliates or associates, has become the (beneficial) owner of an amount of Common Shares or Financing Preference Shares which the Supervisory Board determines to be substantial (which amount shall in no event be less than 10% of the shares then outstanding), and a determination that (a) such ownership is intended to cause or pressure us to enter into transactions intended to provide such person with short-term financial gain under circumstances that would not be in the interest of QIAGEN and our shareholders or (b) such ownership is reasonably likely to cause a material adverse impact on our business prospects.

## **Pre-emptive Rights**

Under the Articles, existing holders of Common Shares will have pre-emptive rights in respect of future issuances of Common Shares in proportion to the number of Common Shares held by them, unless limited or excluded as described below. Holders of Common Shares shall not have pre-emptive rights in respect of future issuances of Financing Preference Shares or Preference Shares. Holders of Financing Preference Shares and Preference Shares shall not have pre-emptive rights in respect of any future issuances of share capital. Pre-emptive rights do not apply with respect to shares issued against contributions other than in cash or shares issued to our employees or one of our group companies. Under the Articles, the Supervisory Board has the power to limit or exclude any pre-emptive rights to which shareholders may be entitled provided that it has been authorized by the General Meeting to do so. The Supervisory Board has been granted such authority through June 14, 2007. The authority of the Supervisory Board to limit or exclude pre-emptive rights can only be exercised if at that time the authority to issue shares is in full force and effect. The authority to limit or exclude pre-emptive rights may be extended in the same manner as the authority to issue shares. If there is no designation of the Supervisory Board to limit or exclude pre-emptive rights in force, the general meeting of shareholders shall have authority to limit or exclude such pre-emptive rights, but only upon the proposal of the Supervisory Board.

Resolutions of the General Meeting (i) to limit or exclude pre-emptive rights or (ii) to designate the Supervisory Board as the corporate body that has authority to limit or exclude pre-emptive rights, require a majority of at least two-thirds of the votes cast in a meeting of shareholders if less than 50% of the issued share capital is present or represented. For these purposes, issuances of shares include the granting of rights to subscribe for shares, such as options and warrants, but not the issue of shares upon exercise of such rights.

## **Acquisition of our Own Shares**

We may acquire our own shares, subject to certain provisions of Dutch law and the Articles, if (i) shareholders' equity less the payment required to make the acquisition does not fall below the sum of paid-up and called up capital and any reserves required by Dutch law or the Articles and (ii) we and our subsidiaries would not thereafter hold shares with an aggregate par value exceeding one-tenth of our issued share capital. Shares that we hold in our own capital or shares held by one of our subsidiaries may not be voted. The Managing Board, subject to the approval of the Supervisory Board, may effect our acquisition of shares in our own capital. Our acquisitions of shares in our own capital may only take place if the General Meeting has granted to the Managing Board the authority to effect such acquisitions. Such authority may apply for a maximum period of 18 months and must specify the number of shares that may be acquired, the manner in which shares may be acquired and the price limits within which shares may be acquired.

## **Capital Reduction**

Subject to the provisions of Dutch law and the Articles, the General Meeting may, upon the proposal of the Supervisory Board, resolve to reduce the issued share capital by (i) canceling shares or (ii) reducing the par value of shares through an amendment of the Articles. Cancellation with repayment of shares or partial repayment on shares or release from the obligation to pay up may also be made or given exclusively with respect to Common Shares, Financing Preference Shares or Preference Shares.

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### **Annual Accounts**

We have a calendar fiscal year. Dutch law requires that within five months after the end of our fiscal year, unless the General Meeting has extended this period by a maximum period of six months on account of special circumstances, the Managing Board must submit to the shareholders a report with respect to such fiscal year, including our financial statements for such year accompanied by a report of an independent accountant. The annual report is submitted to the annual General Meeting for adoption.

### **Dividends**

Subject to certain exceptions, dividends may only be paid out of profits as shown in our annual financial statements as adopted by the General Meeting. Distributions may not be made if the distribution would reduce shareholders' equity below the sum of the paid-up capital and any reserves required by Dutch law or the Articles.

Out of profits, dividends must first be paid on any outstanding Preference Shares (the "Preference Share Dividend") in a percentage (the "Preference Share Dividend Percentage") of the obligatory amount (call) paid up on such shares as at the beginning of the fiscal year in respect of which the distribution is made. The Preference Share Dividend Percentage is equal to the Average Main Refinancing Rates during the financial year for which the distribution is made. Average Main Refinancing Rate shall be understood to mean the average value on each individual day during the financial year for which the distribution is made of the Main refinancing Rates prevailing on such day. Main refinancing Rate shall be understood to mean the rate of the Main Refinancing Operation as determined and published from time to time by the European Central Bank. If and to the extent that profits are not sufficient to pay the Preference Share Dividend in full, the deficit shall be paid out of the reserves, with the exception of any reserve, which was formed as share premium reserve upon the issue of Financing Preference Shares. If in any fiscal year the profit is not sufficient to make the distributions referred to above and if no distribution or only a partial distribution is made from the reserves referred to above, such that the deficit is not fully made good no further distributions will be made as described below until the deficit has been made good.

Out of profits remaining after payment of any dividends on Preference Shares, such amounts shall be kept in reserve as determined by the Supervisory Board. Out of any remaining profits not allocated to reserve, a dividend (the "Financing Preference Share Dividend") shall be paid on the Financing Preference Shares in a percentage (the "Financing Preference Share Dividend Percentage") over the par value, increased by the amount of share premium that was paid upon the first issue of Financing Preference Shares, which percentage is related to the average effective yield on the prime interest rate on corporate loans in the United States as quoted in the Wall Street Journal. If and to the extent that the profits are not sufficient to pay the Financing Preference Share Dividend in full, the deficit may be paid out of the reserves if the Managing Board so decides with the approval of the Supervisory Board, with the exception of the reserve which was formed as share premium upon the issue of Financing Preference Shares.

Insofar as the profits have not been distributed or allocated to reserves as specified above, they are at the free disposal of the General Meeting provided that no further dividends will be distributed on the Preference Shares or the Financing Preference Shares.

The General Meeting may resolve, on the proposal of the Supervisory Board, to distribute dividends or reserves, wholly or partially, in the form of QIAGEN shares.



Distributions as described above are payable as from a date to be determined by the Supervisory Board. The date of payment on Type I shares may differ from the date of payment on Type II shares. Distributions will be made payable at an address or addresses in The Netherlands to be determined by the Supervisory Board, as well as at least one address in each country where the shares are listed or quoted for trading. The Supervisory Board may determine the method of payment of cash distributions, provided that cash distributions in respect of Type II shares will, subject to certain exceptions, be paid in the currency of a country where our shares are listed or quoted for trading, converted at the close of business on a day to be determined for that purpose by the Supervisory Board.

Dutch law, making the declaration of dividends out of the profits that are at the free disposal of the General Meeting the exclusive right of the General Meeting, is different from the corporate law of most jurisdictions in the United States, which permit a corporation's board of directors to declare dividends.

#### **Shareholder Meetings, Voting Rights and Other Shareholder Rights**

The annual General Meeting is held within six months after the end of each fiscal year for the purpose of, among other things, adopting the annual accounts and the filling of any vacancies on the Managing and Supervisory Boards.

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Extraordinary General Meetings are held as often as deemed necessary by the Managing Board or Supervisory Board, or upon the request of one or more shareholders and other persons entitled to attend meetings jointly representing at least 40% of our issued share capital or by one or more shareholders jointly representing at least 10% of our issued share capital as provided for under the laws of The Netherlands.

General Meetings are held in Amsterdam, Haarlemmermeer (Schiphol Airport), Arnhem, Maastricht, Rotterdam, Venlo or The Hague. The notice convening a General Meeting must be given to the shareholders by mail and by advertisement in at least one national daily newspaper published in The Netherlands no later than the fifteenth day prior to the meeting. The notice will contain or be accompanied by the agenda for the meeting.

The agenda shall contain such subjects to be considered at the General Meeting, as the persons convening or requesting the meeting shall decide. One or more shareholders representing at least 10% of the issued share capital may request the Managing Board or Supervisory Board in writing, at least sixty days but not more than ninety days before the anniversary of the date on which the prior year's meeting was convened, to include certain subjects in the agenda. No valid resolutions can be adopted at a General Meeting in respect of subjects which are not mentioned in the agenda.

General Meetings are presided over by the chairman of the Supervisory Board or, in his absence, by any person nominated by the Supervisory Board.

At the General Meeting, each share shall confer the right to cast one vote, unless otherwise provided by law or the Articles. No votes may be cast in respect of shares that we or our subsidiaries hold, or by usufructuaries and pledges of shares. All shareholders and other persons entitled to vote at General Meetings are entitled to attend General Meetings, to address the meeting and to vote. They must notify the Managing Board in writing of their intention to be present or represented not later than on the third day prior to the day of the meeting, unless the Managing Board permits notification within a shorter period of time prior to any such meeting. Subject to certain exceptions, resolutions may be passed by a simple majority of the votes cast.

Except for resolutions to be adopted by the meeting of holders of Preference Shares, our Articles of Association do not allow the adoption of shareholders resolutions by written consent (or otherwise without holding a meeting).

A resolution of the General Meeting to amend the Articles, dissolve QIAGEN, issue shares or grant rights to subscribe for shares or limit or exclude any pre-emptive rights to which shareholders shall be entitled is valid only if proposed to the General Meeting by the Supervisory Board.

A resolution of the General Meeting to amend the Articles is further only valid if the complete proposal has been made available for inspection by the shareholders and the other persons entitled to attend General Meetings at our offices as from the day of notice convening such meeting until the end of the meeting. A resolution to amend the Articles to change the rights attached to the shares of a specific class requires the approval of the relevant class meeting.

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Resolutions of the General Meeting in a meeting that has not been convened by the Managing Board and/or the Supervisory Board, or resolutions included on the agenda for the meeting at the request of shareholders, will be valid only if adopted with a majority of two-thirds of votes cast representing more than half the issued share capital, unless the Articles require a greater majority or quorum. Our Articles do not provide for shareholders to act by written consent outside of a General Meeting.

A resolution of the General Meeting to approve a legal merger or the sale of all or substantially all of our assets is valid only if adopted by a vote of at least two-thirds of the issued share capital, unless proposed by the Supervisory Board, in which case a simple majority of the votes cast shall be sufficient.

A shareholder shall upon request be provided, free of charge, with written evidence of the contents of the share register with regard to the shares registered in its name. Furthermore any shareholder shall, upon written request, have the right, during normal business hours, to inspect our share register and a list of our shareholders and their addresses and shareholdings, and to make copies or extracts therefrom. Such request must be directed to our Managing Directors at our registered office in the Netherlands or at our principal place of business. Financial records and other company documents (other than made public) are not available in this manner for shareholder review but an extract of the minutes of the general meeting shall be made available.

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### **No Derivative Actions; Right to Request Independent Inquiry**

Dutch law does not afford shareholders the right to institute actions on behalf of or in our interest. Shareholders holding at least one-tenth of our issued capital or EUR 225,000 in nominal amount of our shares may inform the Managing Board and the Supervisory Board of their objections as to the policy or the course of our affairs and, within a reasonable time thereafter, may request the Enterprises Division of the Court of Appeal in Amsterdam to order an inquiry into the policy and the course of our affairs by independent investigators. If such an inquiry is ordered and the investigators conclude that there has been mismanagement, the shareholders can request the Division to order certain measures such as a suspension or annulment of resolutions.

### **Liquidation Rights**

In the event of our dissolution and liquidation, the assets remaining after payment of all debts and liquidation expenses will be distributed among registered holders of Common Shares in proportion to the par value of their Common Shares, subject to liquidation preference rights of holders of Preference Shares and Financing Preference Shares, if any.

### **Restrictions on Transfer of Preference Shares**

The Supervisory board upon application in writing must approve each transfer of Preference Shares. If approval is refused, the Supervisory Board will designate prospective purchasers willing and able to purchase the shares, otherwise the transfer will be deemed approved.

### **Limitations on Rights to Own Securities**

Other than with respect to usufructuaries and pledges who have no voting rights, our Articles do not impose limitations on rights to own securities.

### **Provisions which may Defer or Prevent a Change in Control**

Our Articles of Association allow us, under certain circumstances, to prevent a third party from obtaining a majority of the voting control of our shares by issuing preference shares. Pursuant to these provisions (and pursuant to the resolution adopted by our general meeting on June 14, 2002), the Supervisory Board is authorized to issue preference shares if (i) a person has (directly or indirectly) acquired or has expressed a desire to acquire, more than 20% of our issued capital or (ii) a person holding at least a 10% interest in us has been designated as a hostile person by the Supervisory Board.

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If the Supervisory Board opposes an intended take-over and authorizes the issuance of preference shares, the bidder may withdraw its bid or enter into negotiations with the Managing Board and/or Supervisory Board and agree on a higher bid price for our shares.

### **Ownership Threshold Requiring Disclosure**

Our Articles do not provide an ownership threshold above which ownership must be disclosed.

### **Exchange Controls**

There are currently no limitations either under the laws of The Netherlands or in our Articles of Association, to the rights of shareholders from outside The Netherlands to hold or vote Common Shares. Under current foreign exchange regulations in The Netherlands, there are no material limitations on the amount of cash payments that we may remit to residents of foreign countries.

### **Obligation of Shareholders to Disclose Major Holdings**

Holders of our ordinary shares or rights to acquire ordinary shares (which includes convertible bonds) may be subject to notification obligations under the Dutch 1996 Act on the Disclosure of Holding in Listed Companies (the 1996 Disclosure Act ) and the Dutch 1995 Act on the Supervision of the Securities Trade (the 1995 Securities Act ).

Under the 1996 Disclosure Act, any person who, directly or indirectly, acquires or disposes of an interest or a potential interest (which includes convertible bonds) in the capital or the voting rights of a public limited liability company incorporated under Dutch law with an official listing on a stock exchange within the European Economic Area, including the Prime Standard trading segment of the Frankfurt Stock Exchange, must immediately give written

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notice to the company and the Netherlands Authority for the Financial Markets ( AFM ) if, as a result of such acquisition or disposal, the percentage of our capital or voting rights held by such person falls within another percentage range as compared to the percentage range applicable to the rights held by such person previously. The percentage ranges referred to in the Disclosure Act are 0-5%, 5-10%, 10-25%, 25-50%, 50-66-2/3% and over 66-2/3%.

For the purpose of the notification obligation, the following interests must be taken into account: (i) ordinary shares directly held (or acquired or disposed of) by any person, (ii) ordinary shares held (or acquired or disposed of) by such person's subsidiaries or by a third party for such person's account or by a third party with whom such person has concluded an oral or written voting agreement and (iii) ordinary shares which such person, or any subsidiary or third party referred to above, may acquire pursuant to any option or other right which such person has (or acquires or disposes of), including through the exercise of options or warrants. Special rules apply to the attribution of the ordinary shares which are part of the property of a partnership or other community of property. A holder of a pledge or right of usufruct in respect of ordinary shares can also be subject to a notification obligation if such person has, or can acquire, the right to vote on ordinary shares. If a pledgor or usufructuary acquires such voting rights, this may trigger a notification obligation for the holder of the ordinary shares.

Under section 2A of the Disclosure Act, each of our managing and supervisory directors must without delay notify both the AFM and us of any changes in his interest or potential interest in our capital or voting rights, unless such change is not caused by the relevant director himself.

The AFM will publish all disclosures made public by means of an advertisement in a newspaper distributed throughout The Netherlands as well as on its public website ([www.afm.nl](http://www.afm.nl)).

In addition, pursuant to the 1995 Securities Act and a decree based thereon, a holder that directly or indirectly has a capital interest of more than 25% in QIAGEN must by means of a standard form within ten days after the end of month in which the transaction took place notify the AFM of any and all transactions (including, without limitation, an acquisition or disposal of ordinary shares) that it carries out or causes to be carried out in our issued securities (including convertible bonds). If that shareholder is a legal entity and not an individual, the obligation is extended to its managing directors and members of its supervisory board. The notification obligation also rests on the spouses of the 25% shareholders, its managing directors and members of its supervisory board and persons with whom they share a household. The AFM keeps a public register of all notifications made pursuant to the 1996 Disclosure Act and the 1995 Securities Act and publishes any notification it receives.

Non-compliance with the notification obligations under the 1996 Disclosure Act or the 1995 Securities Act can lead to imprisonment or criminal fines, or administrative fines or other administrative sanctions. In addition, non-compliance with the notification obligations under the 1996 Disclosure Act may lead to civil sanctions, including, without limitation, suspension of the voting rights attaching to our shares held by the offender for a period of not more than three years, suspension of a resolution of our general meeting of shareholders, nullification of a resolution adopted by our general meeting of shareholders (insofar as it can be assumed that such resolution would not have been adopted if the offender had not voted) and a prohibition for the offender to acquire our ordinary shares for a period of not more than five years.

## **Taxation**

The following is a general summary of certain material United States federal income and The Netherlands tax consequences to holders of our Common Shares (collectively, U.S. Holders ) who are (i) citizens or residents of the United States, (ii) entities subject to U.S. corporate tax, (iii) certain pension trusts and other retirement or employee benefits organizations established in the United States but generally exempt from U.S. tax, (iv) certain not-for-profit organizations established in the United States but generally exempt from U.S. tax, (v) United States regulated investment companies, United States real estate investment trusts, and United States real estate mortgage conduits, and (vi) partnerships or

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similar pass-through entities, estates, and trusts to the extent the income of such partnerships, similar entities, estates, or trusts is subject to tax in the United States as income of a resident in its hands or the hands of its partners, beneficiaries, or grantors. This summary does not discuss every aspect of such taxation that may be relevant to U.S. Holders. Therefore, all prospective purchasers of our Common Shares who would be U.S. Holders are advised to consult their own tax advisor with respect to the United States federal, state and local tax consequences, as well as the Netherlands tax consequences, of the ownership of our Common Shares. This summary is based upon the advice of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. with respect to tax consequences for U.S. Holders and Baker & McKenzie with respect to tax consequences under Netherlands law.

The statements of The Netherlands and United States tax laws set out below are based on the laws in force as of the date of this Annual Report on Form 20-F, and as a consequence are subject to any changes in United

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States or The Netherlands law, or in the double taxation conventions between the United States and The Netherlands, occurring after such date.

### **Netherlands Tax Considerations**

The following describes the material tax consequences under Netherlands law of an investment in our Common Shares. Such description is based on current Netherlands law as interpreted under officially published case law, and is limited to the tax implications for an owner of our Common Shares who is not, or is not deemed to be, a resident of The Netherlands for purposes of the relevant tax codes (a non-resident Shareholder or Shareholder ).

#### ***Dividend Withholding Tax***

**General.** Dividends we distribute are subject to a withholding tax imposed by The Netherlands at a rate of generally 25%. The term dividends means income from shares or other rights participating in profits, as well as income from other corporate rights that is subjected to the same taxation treatment as income from shares by the laws of the Netherlands. Dividends include dividends in cash or in kind, constructive dividends, certain repayments of capital qualified as dividends, interest on loans that are treated as equity for Netherlands corporate income tax purposes and liquidation proceeds in excess of, for Netherlands tax purposes, recognized paid-in capital. Stock dividends are also subject to withholding tax derived from our paid-in share premium which is recognized for Netherlands tax purposes.

No withholding tax applies on the proceeds resulting from the sale or disposition of our Common Shares to persons other than QIAGEN and our affiliates.

A Shareholder can be eligible for a reduction or a refund of Netherlands dividend withholding tax under a tax convention which is in effect between the country of residence of the Shareholder and The Netherlands. The Netherlands has concluded such conventions with, among others, the United States, Canada, Switzerland, Japan and all EU Member States except Portugal. Under most of those conventions, Netherlands dividend withholding tax is reduced to 15% or a lower rate.

**U.S. Shareholders.** Under the Tax Convention between The Netherlands and the United States (the Convention ), the withholding tax on dividends we pay to a resident of the United States (as defined in the Convention) who is entitled to the benefits of the Convention, may be reduced to 5% (in the case of a corporate U.S. Shareholder that holds 10% or more of the voting power of a Netherlands company) or 15% (in the case of other U.S. Shareholders), unless such U.S. shareholders have a permanent establishment in The Netherlands with which the shares are effectively connected. Dividends we pay to U.S. pension funds and U.S. tax exempt organizations may be eligible for an exemption from dividend withholding tax.

**Dividend Stripping.** On July 9, 2002, the Netherlands Senate approved a bill containing measures against what is known as dividend stripping . According to this bill, as of April 27, 2001, a refund, reduction, exemption, or credit of Netherlands dividend withholding tax on the basis of Netherlands tax law or on the basis of a tax treaty between the Netherlands and another state, will only be granted if the dividends are paid to the beneficial owner ( *uiteindelijk gerechtigde* ) of the dividends. The term beneficial owner is not defined, but has been interpreted in Netherlands jurisprudence. The bill includes a non-exhaustive description of various situations in which the recipient of the dividend distribution is not



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deemed to be the beneficial owner. In general terms, dividend stripping can be described as the situation in which a foreign or domestic person (usually, but not necessarily, the original shareholder) has transferred his shares or his entitlement to the dividend distributions to a party that has a more favorable right to a refund or reduction of Netherlands dividend withholding tax than the foreign or domestic person. In these situations, the foreign or domestic person (usually the original shareholder) avoids Netherlands dividend withholding tax while retaining his beneficial interest in the shares and the dividend distributions, by transferring his shares or his entitlement to the dividend distributions.

### *Income Tax and Corporate Income Tax*

**General.** A non-resident Shareholder will not be subject to Netherlands income tax with respect to dividends we distribute on our Common Shares or with respect to capital gains derived from the sale or disposition of our Common Shares, provided that:

(a) the non-resident Shareholder does not carry on or have an interest in a business in The Netherlands through a permanent establishment or a permanent representative to which or to whom the Common Shares are attributable or deemed to be attributable;

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(b) the non-resident Shareholder does not have a direct or indirect substantial or deemed substantial interest ( *aanmerkelijk belang* , as defined in the Netherlands tax code) in our share capital or, in the event the Shareholder does have such a substantial interest, such interest is a business asset; such interest is a business asset ; and

(c) the non-resident Shareholder is not entitled to a share in the profits of an enterprise, to which our Common Shares are attributable and that is effectively managed in The Netherlands, other than by way of securities or through an employment contract.

In general terms, a substantial interest ( *aanmerkelijk belang* ) in our share capital does not exist if the Shareholder (individuals as well as corporations), alone or together with his partner, does not own, directly or indirectly, 5% or more of the nominal paid-in capital of, or any class of our shares, does not have the right to acquire 5% or more of the nominal paid-in capital of, or any class of our shares (including a call option) and does not have the right to share in our profit or liquidation revenue amounting 5% or more of the annual profits or liquidation revenue.

There is no all-encompassing definition of the term business asset ; whether this determination can be made in general depends on the facts presented and in particular on the activities performed by the Shareholder. If the Shareholder materially conducts a business activity, while the key interest of his investment in our Shares will not be his earnings out of the investment in our Shares but our economic activity, an investment in our Shares will generally be deemed to constitute a business asset, in particular if the Shareholder s involvement in our business will exceed regular monitoring of his investment in our Shares.

**U.S. Shareholders.** Pursuant to the Convention, the gain derived by a U.S. Shareholder from an alienation of our Common Shares constituting a substantial interest of the Shareholder in QIAGEN, not effectively connected or deemed connected with a permanent establishment or permanent representative of the Shareholder in The Netherlands, is not subject to Netherlands income tax or corporate income tax, provided that the gain from the alienation of our Common Shares is not derived by an individual Shareholder who has, at any time during the five-year period preceding such alienation, been a resident of The Netherlands according to Netherlands tax law and who owns, either alone or together with close relatives, at least 25% of any class of our shares.

### ***Gift and Inheritance Tax***

A gift or inheritance of our Common Shares from a non-resident Shareholder will not be subject to a Netherlands gift and inheritance tax, provided that the Shareholder does not own a business which is, in whole or in part, carried on through a permanent establishment or a permanent representative in The Netherlands to which or to whom our Common Shares are attributable.

### **United States Federal Income Tax Considerations**

The following summarizes the material U.S. federal income tax consequences of the ownership of our Common Shares by an investor that purchases such Common Shares and that will hold the Common Shares as capital assets. This summary does not purport to be a complete analysis or listing of all potential tax considerations and does not address holders subject to special treatment under U.S. federal income tax laws (including insurance companies, tax-exempt organizations, regulated investment companies, financial institutions, broker dealers or holders that own, actually or constructively, 10% or more of our voting shares).

As used herein, references to a U.S. Holder are to a holder of our Common Shares that is (i) a citizen or resident of the United States, (ii) a corporation organized under the laws of the United States or any political subdivision thereof, or (iii) a person or entity otherwise subject to United States federal income taxation on a net income basis with respect to our Common Shares (including a non-resident alien or foreign corporation that holds, or is deemed to hold, our Common Shares in connection with the conduct of a U.S. trade or business); and references to a non-U.S. Holder are to a holder that is not a U.S. person for U.S. federal income tax purposes.

#### *Taxation of Dividends*

To the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles, distributions, if any, made with respect to our Common Shares will be includable for U.S. federal income tax purposes in the income of a U.S. Holder as ordinary dividend income in an amount equal to the sum of any cash and the fair market value of any property that we distribute, before reduction for Netherlands withholding tax. To the extent that such distribution exceeds our current or accumulated earnings and profits, it will be treated as a non-taxable return of capital to the extent of the U.S. Holder's adjusted tax basis in our Common Shares and thereafter as taxable capital gain. Dividends generally will be treated as income from sources outside the

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United States and generally will be passive income (or, in the case of certain holders, financial services income ) for purposes of the foreign tax credit limitation. Dividends we pay will not be eligible for the dividends received deduction allowed to corporations in certain circumstances under the United States Internal Revenue Code of 1986, as amended (the Code). A U.S. Holder may elect annually to either deduct The Netherlands withholding tax (see Taxation Netherlands Tax Considerations Dividend Withholding Tax ) against their income or take the withholding taxes as a credit against their U.S. tax liability, subject to U.S. foreign tax credit limitation rules.

Dividends we pay in a currency other than the U.S. dollar will be included in the income of a U.S. Holder in a U.S. dollar amount based upon the exchange rate in effect on the date of receipt. A U.S. Holder will have a tax basis in such foreign currency for U.S. federal income tax purposes equal to its U.S. dollar value on the date of receipt. Any gain or loss on a subsequent disposition of such foreign currency (including a subsequent conversion into U.S. dollars) will be ordinary income or loss. Such gain or loss will generally be income from sources within the U.S. for foreign tax credit limitation purposes.

A non-U.S. Holder generally will not be subject to U.S. federal income tax or withholding tax on distributions with respect to our Common Shares that are treated as dividend income for U.S. federal income tax purposes unless such dividends are effectively connected with the conduct of a trade or business within the United States by such non-U.S. Holder, (and are attributable to a permanent establishment maintained in the United States by such non-U.S. Holder, if an applicable income tax treaty so requires as a condition for such non-U.S. Holder to be subject to U.S. taxation on a net income basis in respect of income from our Common Shares), in which case the non-U.S. Holder generally will be subject to tax in respect of such dividends in the same manner as a U.S. Holder. Any such effectively connected dividends received by a non-United States corporation may also, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. A non-U.S. Holder generally will not be subject to U.S. federal income tax or withholding tax on distributions with respect to our Common Shares that are treated as capital gain for U.S. federal income tax purposes unless such holder would be subject to U.S. federal income tax on gain realized on the sale or other disposition of our Common Shares, as discussed below.

### ***Taxation of Capital Gains***

Subject to the PFIC rules discussed below, upon the sale or other disposition of our Common Shares, a U.S. Holder will recognize gain or loss for U.S. federal income tax purposes in an amount equal to the difference between the amount realized on the disposition of our Common Shares and the U.S. Holder's adjusted tax basis in our Common Shares. Such gain or loss generally will be subject to U.S. federal income tax. An individual U.S. Holder is generally subject to a maximum capital gains rate of 20% for our Common Shares held for more than year. For U.S. federal income tax purposes, capital losses are subject to limitations on deductibility. Gain realized by a U.S. Holder on the sale or other disposition of our Common Shares generally will be treated as income from sources within the United States for purposes of the foreign tax credit limitation.

A non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on gain realized on the sale or other disposition of our Common Shares unless (i) the gain is effectively connected with a trade or business of the non-U.S. Holder in the United States (and is attributable to a permanent establishment maintained in the United States by such non-U.S. Holder, if an applicable income tax treaty so requires as a condition for such non-U.S. Holder to be subject to U.S. taxation on a net income basis in respect of gain from the sale or other disposition of our Common Shares) or (ii) such holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale, and certain other conditions are met. Effectively connected gains realized by a corporate Non-U.S. Holder may also, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

### ***Passive Foreign Investment Company Status***

We may be classified as a passive foreign investment company ( PFIC ) for U.S. federal income tax purposes if certain tests are met. We will be a PFIC with respect to a U.S. Holder if for any taxable year in which the U.S. Holder held our Common Shares, either (i) 75% or more of our gross income for the taxable year is passive income; or (ii) the average value of our assets (during the taxable year) which produce or are held for the production of passive income is at least 50% of the average value of all assets for such year. Passive income means, in general, dividends, interest, royalties, rents (other than rents and royalties derived in the active conduct of a trade or business and not derived from a related person), annuities, and gains from assets which would produce such income other than sales of inventory. For the purpose of the PFIC tests, if a foreign corporation owns at least 25% by value of the stock of another corporation, the foreign corporation is treated as owning its proportionate share of the assets of the other corporation, and as if it had received directly its proportionate share of the income of such other corporation. The effect of this special provision with respect to QIAGEN and our ownership of our subsidiaries is that we, for

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purposes of the income and assets tests described above, will be treated as owning directly our proportionate share of the assets of our subsidiaries and of receiving directly our proportionate share of each of those companies' income, if any, so long as we own, directly or indirectly, at least 25% by value of the particular company's stock. Active business income of our subsidiaries will be treated as our active business income, rather than as passive income. Based on our current income, assets and activities, we do not believe that we are currently a PFIC. No assurances can be made, however, that the IRS will not challenge this position or that we will not subsequently become a PFIC.

A determination as to PFIC status is made annually (although an initial determination that we are a PFIC will generally be binding on a shareholder who does not make the qualified election discussed below with respect to the first year such shareholder holds or is deemed to hold our Common Shares). Whether we are a PFIC in any year and the tax consequences relating to PFIC status will depend on the composition of our income and assets. For example, we retain in our business a substantial amount of cash and cash equivalents, and such cash balances are considered by the IRS to be passive assets, even if held as working capital for an active business. Accurate predictions of the composition of our income are particularly difficult in light of the volatile nature of earnings patterns in technological industries. In addition, U.S. tax law is not entirely clear as to the proper classification of all types of income that we may realize or all types of assets that we may hold. We will, however, monitor our income and assets closely in order to make an annual determination as to whether we are a PFIC. Following the close of any tax year, we intend to promptly send a notice to all shareholders of record at any time during such year, if we determine that we are a PFIC.

If we are a PFIC, each of our direct and certain indirect shareholders that is a U.S. person ( U.S. Shareholders ) either (i) may make an election to report currently its *pro rata* share of our ordinary earnings and net capital gain even if no distributions are actually received from us (the qualified election ), or (ii) upon a disposition of our Common Shares, including a disposition pursuant to an otherwise tax-free reorganization, or receipt of an excess distribution (as defined in the Code), will be subject to tax (including an interest charge) generally as if the gain or distribution were earned ratably over the period in which our Common Shares were held and face other adverse tax consequences. Alternatively, under the Taxpayer Relief Act of 1997 , effective for taxable years of U.S. persons beginning after December 31, 1997, U.S. Shareholders may make a mark-to-market election with respect to our Common Shares under which the U.S. Shareholder would include in income each year an amount equal to the excess, if any, of the market value of our Common Shares as of the close of the taxable year over the U.S. Shareholder's adjusted basis in such stock. Under this election, the U.S. Shareholder would be allowed a deduction for the excess, if any, of the adjusted basis of our Common Shares over the market value of the shares as of the close of the taxable year but only to the extent of any net mark-to-market gains with respect to our Common Shares included by the shareholder for prior taxable years. The U.S. Shareholder's adjusted basis in our Common Shares would be adjusted to reflect the amounts included or deducted under this election. Amounts included in income pursuant to a mark-to-market election, as well as gain on the actual sale or other disposition of our Common Shares would be treated as ordinary income. Ordinary loss treatment would also apply to the deductible portion of any mark-to-market loss on our Common Shares, as well as to any loss realized on the actual sale or other disposition of our Common Shares to the extent that the amount of such loss did not exceed the net mark-to-market gains previously included with respect to such stock. An election to mark to market will apply to the taxable year for which made and all subsequent taxable years, unless our Common Shares cease to be treated as marketable stock or the Secretary of the Treasury consents to the revocation of such election.

A shareholder who makes a qualified election may recognize ordinary income or loss as a result of currency fluctuations between the dates of our deemed and actual distributions.

If we become a PFIC, each U.S. Shareholder would be required annually to file IRS Form 8621 (Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund) with such shareholder's timely filed income tax return and with the Internal Revenue Service, whether or not the qualified election (or, for tax years after 1997, the mark-to-market election) is made. A U.S. Shareholder choosing to make a qualified election must also include a shareholder election statement and the PFIC annual information statement that we will provide (as described below) when filing IRS Form 8621 and its income tax return, and should send a copy of the shareholder election statement to the Internal Revenue Service. If we determine that we have become a PFIC, within two months after the end of each year we intend to supply the PFIC annual information statement necessary to make the qualified election for such year to each U.S. Shareholder of record at the end of such year. In such case, we also intend to supply the PFIC annual information statement to any shareholder or former shareholder who requests it.

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Prospective purchasers of our Common Shares are urged to consult their tax advisors regarding the PFIC rules and their effect on an investment in our Common Shares, with particular regard to (i) the advisability of making the qualified election in the event that we notify the shareholders that we have become a PFIC in any taxable year, or (ii) the advisability of making the mark-to-market election provided in the tax law.

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### ***Backup Withholding and Information Reporting***

In general, dividend payments, or other taxable distributions, paid within the United States or through certain U.S.-related financial intermediaries on our Common Shares will be subject to information reporting requirements and backup withholding tax at the rate of 31% for a non-corporate United States person and, who also:

- fails to provide an accurate taxpayer identification number;
- is notified by the Internal Revenue Service that the individual has failed to report all interest or dividends required to be shown on the Federal income tax returns; or
- in certain circumstances, fails to comply with applicable certification requirements.

Certain corporations and persons that are not United States persons may be required to establish their exemption from information reporting and backup withholding by certifying their status on Internal Revenue Service Form W-8 or W-9.

If a United States person sells our Common Shares to or through a United States office of a broker, the payment of the proceeds is subject to both United States backup withholding and information reporting unless the individual can certify that they are a non-U.S. person, under penalties of perjury, or they otherwise establish an exemption. If a United States person sells our Common Shares through a non-U.S. office of a non-U.S. broker and the sale proceeds are paid to the person outside the United States then information reporting and backup withholding generally will not apply to that payment. However, United States information reporting requirements, but not backup withholding, will apply to a payment of sales proceeds, even if that payment is made to the United States person outside the United States, if the person sells our Common Shares through a non-U.S. office of a broker that is a U.S. person or has certain other contacts with the United States.

An individual generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed the individual's income tax liability by filing a refund claim with the United States Internal Revenue Service.

### **Foreign Currency Issues**

If dividends are paid in euros, the amount of the dividend distribution included in the income of a U.S. Holder will be the U.S. dollar value of the payments made in euros, determined at a spot, euro/U.S. dollar rate applicable to the date such dividend is includible in the income of the U.S. Holder, regardless of whether the payment is in fact converted into U.S. dollars. Generally, gain or loss (if any) resulting from currency exchange fluctuations during the period from the date the dividend is paid to the date such payment is converted into U.S. dollars will be treated as ordinary income or loss. We have never paid cash dividends on our share capital and do not intend to do so for the foreseeable future.

## **Documents on Display**



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Documents referred to in this Annual Report may be inspected at our principal executive office located at Spoorstraat 50, 5911 KJ Venlo, The Netherlands.

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### **Item 11. Quantitative and Qualitative Disclosures About Market Risk**

Our market risk relates primarily to interest rate exposures on cash, marketable securities and borrowings and foreign currency exposures on intercompany transactions. The overall objective of our risk management is to reduce the potential negative earnings effects from changes in interest and foreign exchange rates. Exposures are managed through operational methods and financial instruments. We do not use financial instruments for trading or other speculative purposes.

#### ***Interest Rate Risk***

Interest income earned on our investment portfolio is affected by changes in the relative levels of market interest rates. We only invest in high-grade investment securities. For the year ended December 31, 2002, the weighted average interest rate on our marketable securities portfolio 1.93% to 2.22%.

Borrowings against lines of credit are at variable interest rates. At December 31, 2002, and 2001, we had \$935,000 and \$6.0 million, respectively, of outstanding lines of credit with an average interest rate of 5.5% at December 31, 2002. A hypothetical adverse 10 percent movement in market interest rates would not have materially impacted our financial statements.

In May 2001, we obtained two new loan facilities one for EUR 50.0 million (approximately \$52.4 million at December 31, 2002) and the other for \$43.5 million with a variable interest rates based on EURIBOR (2.75% at December 31, 2002) plus 1.2% and LIBOR (1.45% at December 31, 2002) plus 1.28%. At December 31, 2002, \$88.4 million had been drawn against these facilities. A hypothetical adverse 10 percent movement in market interest rates would decrease 2002 earnings by approximately \$319,000, based on the year-end interest rate, a loan balance consistent with that at year-end and a constant foreign exchange rate.

#### ***Currency Fluctuations***

We operate on an international basis. A significant portion of our revenues and expenses are earned and incurred in currencies other than the U.S. dollar. The euro is the most significant such currency, with others including the British pound, Japanese yen, Swiss franc, Norwegian Krone and Canadian and Australian dollars. Fluctuations in the value of the currencies in which we conduct our business relative to the U.S. dollar have caused and will continue to cause U.S. dollar translations of such currencies to vary from one period to another. Due to the number of currencies involved, the constantly changing currency exposures, and the potential substantial volatility of currency exchange rates, we cannot predict the effect of exchange rate fluctuations upon future operating results. However, because we have substantial expenses as well as revenues in each of our principal functional currencies, the exposure of our financial results to currency fluctuations is reduced. In general terms, depreciation of the U.S. dollar against our other foreign currencies, such as occurred in 2002 with respect to the euro, will increase reported net sales. However, this impact normally will be at least partially offset in the results of operations by gains or losses from foreign currency transactions.

#### ***Currency Hedging***

In the ordinary course of business, we purchase instruments with which we intend to hedge foreign currency fluctuations with the principle objective of minimizing the risks and/or costs associated with global financial and operating activities. Generally we hedge a majority of the anticipated cash flow that we expect to exchange into other currencies, subject to our short-term financing needs. We do not utilize financial instruments for trading or other speculative purposes. At December 31, 2002, these foreign currency instruments consisted of options, which give us the right, but not the obligation, to purchase foreign currencies in exchange for U.S. dollars at predetermined exchange rates. These options are marked to market through our statements of income and are not designated as effective hedges according to the provisions of SFAS 133. At December 31, 2002, the notional amount of foreign currency exchange options was \$5.6 million. The functional currency of the foreign currency exchange options was the euro, with a notional weighted average exchange rate of 1.0600.

***Foreign Currency Exchange Rate Risk***

Our principal production and manufacturing facility is located in Germany and intercompany sales of inventory expose us to foreign currency exchange rate risk. Intercompany sales of inventory are generally denominated in the local currency of the subsidiary purchasing the inventory in order to centralize foreign currency risk with our German subsidiary. Payment for intercompany purchases of inventory is required within 30 days from invoice date. The delay between the date the German subsidiary records revenue and the date when the payment is received from the purchasing subsidiaries exposes us to foreign exchange risk. The exposure results primarily from those transactions between Germany and the U.S.

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The foreign currency exchange rate risk is partially offset by transactions of the German subsidiary denominated in U.S. dollars. Hedging instruments include foreign currency put options that are purchased to protect the majority of the existing and/or anticipated receivables resulting from intercompany sales from Germany to the U.S. These options give us the right, but not the obligation, to purchase foreign currencies in exchange for U.S. dollars at predetermined exchange rates. Management does not believe that our exposure to foreign currency exchange rate risk is material.

**Item 12. Description of Securities other than Equity Securities**

Not Applicable

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**PART II**

**Item 13. Defaults, Dividend Arrearages and Delinquencies**

Not applicable.

**Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds**

Not applicable.

**Item 15. Controls and Procedures**

Our Managing Directors, with the assistance of other members of management, performed an evaluation of our disclosure controls and procedures, as that term is defined in Rule 13a-14(c) of the Securities Exchange Act of 1934, as amended, within 90 days of the date of this report. Based on that evaluation, they concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed in this report is recorded, processed, summarized and reported on a timely basis.

There were no significant changes in our internal controls or in other factors that could significantly affect internal controls subsequent to the date of the evaluation. No significant deficiencies and material weaknesses were identified that required corrective actions.

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**PART III**

**Item 17. Financial Statements**

See Item 18.

**Item 18. Financial Statements**

See pages F-1 through F-28 included herein.

**Item 19. Exhibits**

- (A) The following financial statements, together with the reports of Ernst & Young LLP and Arthur Andersen LLP thereon, are filed as part of this annual report:

Report of Independent Auditors

Report of Independent Public Accountants

Consolidated Balance Sheets

Consolidated Statements of Income

Consolidated Statements of Shareholders' Equity and Comprehensive Income

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

- (B) For a list of exhibits filed with this Form 20-F, refer to the exhibit index beginning on page 103.

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**QIAGEN N.V. AND SUBSIDIARIES**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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| Report of Independent Public Accountants                                 | F-3         |
| Consolidated Balance Sheets  | F-4         |
| Consolidated Statements of Income  | F-6         |
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| Notes to Consolidated Financial Statements                               | F-10        |

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**REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS**

To the Board of Directors and Shareholders of QIAGEN N.V. and Subsidiaries:

We have audited the accompanying consolidated balance sheet of QIAGEN N.V. and Subsidiaries as of December 31, 2002, and the related consolidated statement of income, shareholders' equity and comprehensive income and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. The consolidated financial statements of QIAGEN N.V. for the years ended December 31, 2001 and 2000, were audited by other auditors who have ceased operations. Those auditors expressed an unqualified opinion on those financial statements in their report dated February 6, 2002.

We conducted our audit in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of QIAGEN N.V. as of December 31, 2002, and the consolidated results of their operations and their cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States.

ERNST & YOUNG LLP

Los Angeles, California

February 6, 2003

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**This is a copy of a previously issued Arthur Andersen LLP report. Arthur Andersen LLP has not reissued the report, nor has Arthur Andersen LLP consented to the inclusion of the report. The consolidated balance sheet as of December 31, 2000, referred to in this report has not been included in the accompanying financial statements.**

**REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS**

To the Board of Directors and Shareholders of QIAGEN N.V. and Subsidiaries:

We have audited the accompanying consolidated balance sheets of QIAGEN N.V. (a Netherlands company) and Subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of income, shareholders' equity and comprehensive income and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of QIAGEN N.V. and Subsidiaries as of December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States.

ARTHUR ANDERSEN LLP

Los Angeles, California

February 6, 2002

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|   | As of December 31,    |                       |
|---|-----------------------|-----------------------|
|   | <u>2002</u>           | <u>2001</u>           |
| <b>Current Assets:</b>  |                       |                       |
| Cash and cash equivalents   | <b>\$ 44,893,000</b>  | \$ 56,460,000         |
| Marketable securities   | <b>11,530,000</b>     | 22,512,000            |
| Notes receivable  | <b>4,337,000</b>      | 3,844,000             |
| Accounts receivable, net of allowance for doubtful accounts of \$2,440,000 and \$2,048,000 in 2002 and 2001, respectively | <b>51,451,000</b>     | 39,955,000            |
| Income taxes receivable   | <b>1,901,000</b>      | 2,439,000             |
| Inventories   | <b>56,113,000</b>     | 31,883,000            |
| Deferred income taxes   | <b>11,629,000</b>     | 11,123,000            |
| Prepaid expenses and other  | <b>11,188,000</b>     | 9,115,000             |
| <b>Total current assets</b>   | <b>193,042,000</b>    | 177,331,000           |
| <b>Long-Term Assets:</b>  |                       |                       |
| Property, plant and equipment, net  | <b>211,913,000</b>    | 160,365,000           |
| Long-term marketable securities, approximately \$66,000 restricted in 2002  | <b>735,000</b>        | 2,759,000             |
| Goodwill  | <b>25,569,000</b>     | 2,259,000             |
| Intangible assets, net of accumulated amortization of \$3,383,000 and \$2,642,000 in 2002 and 2001, respectively          | <b>12,750,000</b>     | 4,881,000             |
| Deferred income taxes   | <b>3,026,000</b>      | 1,804,000             |
| Other assets  | <b>7,476,000</b>      | 7,569,000             |
| <b>Total long-term assets</b>   | <b>261,469,000</b>    | 179,637,000           |
|   | <b>\$ 454,511,000</b> | <b>\$ 356,968,000</b> |

The accompanying notes are an integral part of these consolidated financial statements.

Table of ContentsQIAGEN N.V. AND SUBSIDIARIESCONSOLIDATED BALANCE SHEETSLIABILITIES AND SHAREHOLDERS' EQUITY

|  | As of December 31,    |                       |
|--|-----------------------|-----------------------|
|  | 2002                  | 2001                  |
| <b>Current Liabilities:</b>  |                       |                       |
| Lines of credit  | \$ 935,000            | \$ 6,038,000          |
| Short-term debt  |                       | 281,000               |
| Current portion of long-term debt  | 1,340,000             | 1,138,000             |
| Current portion of capital lease obligations   | 999,000               | 1,085,000             |
| Accounts payable   | 23,661,000            | 20,262,000            |
| Accrued liabilities  | 28,031,000            | 20,235,000            |
| Income taxes payable   | 20,487,000            | 8,434,000             |
| Deferred income taxes  | 6,035,000             | 410,000               |
| <b>Total current liabilities</b>   | <b>81,488,000</b>     | <b>57,883,000</b>     |
| <b>Long-Term Liabilities:</b>  |                       |                       |
| Long-term debt, net of current portion   | 95,733,000            | 70,720,000            |
| Capital lease obligations, net of current portion  | 11,107,000            | 10,463,000            |
| Deferred income taxes  |                       |                       |
| Other  | 3,152,000             | 4,927,000             |
| <b>Total long-term liabilities</b>   | <b>109,992,000</b>    | <b>86,110,000</b>     |
| <b>Commitments and Contingencies (Note 16)</b>   |                       |                       |
| <b>Shareholders' Equity:</b>   |                       |                       |
| Common shares, EUR 0.01 par value  |                       |                       |
| Authorized 260,000,000 shares Issued and outstanding 145,533,589 shares in 2002 and 143,463,800 shares in 2001 | 1,478,000             | 1,458,000             |
| Additional paid-in capital   | 134,547,000           | 123,117,000           |
| Retained earnings  | 120,420,000           | 97,278,000            |
| Accumulated other comprehensive income (loss)  | 6,586,000             | (8,878,000)           |
| <b>Total shareholders' equity</b>  | <b>263,031,000</b>    | <b>212,975,000</b>    |
|  | <b>\$ 454,511,000</b> | <b>\$ 356,968,000</b> |

The accompanying notes are an integral part of these consolidated financial statements.



Table of ContentsQIAGEN N.V. AND SUBSIDIARIESCONSOLIDATED STATEMENTS OF INCOME

|  | Years ended December 31, |                |                |
|--|--------------------------|----------------|----------------|
|  | 2002                     | 2001           | 2000           |
| Net sales  | \$ 298,607,000           | \$ 263,770,000 | \$ 216,802,000 |
| Cost of sales  | 96,508,000               | 79,673,000     | 65,436,000     |
| Gross profit   | 202,099,000              | 184,097,000    | 151,366,000    |
| Operating Expenses:  |                          |                |                |
| Research and development                                       | 28,177,000               | 26,769,000     | 23,372,000     |
| Sales and marketing  | 75,086,000               | 64,830,000     | 54,931,000     |
| General and administrative                                     | 42,030,000               | 36,022,000     | 31,177,000     |
| Acquisition and related costs                                  | 2,848,000                | 3,000,000      | 5,353,000      |
| Closure and related costs                                      | 10,773,000               |                |                |
| Total operating expenses                                       | 158,914,000              | 130,621,000    | 114,833,000    |
| Income from operations   | 43,185,000               | 53,476,000     | 36,533,000     |
| Other Income (Expense):  |                          |                |                |
| Interest income  | 1,234,000                | 1,795,000      | 3,032,000      |
| Interest expense   | (2,565,000)              | (991,000)      | (1,622,000)    |
| Research and development grants                                | 801,000                  | 1,526,000      | 1,212,000      |
| Gain (loss) on foreign currency transactions, net              | (2,208,000)              | 31,000         | (231,000)      |
| Loss from equity method investees                              | (1,340,000)              | (1,373,000)    | (870,000)      |
| Other miscellaneous (expense) income, net                      | (247,000)                | 1,859,000      | 1,070,000      |
| Total other income (expense)                                   | (4,325,000)              | 2,847,000      | 2,591,000      |
| Income before provision for income taxes and minority interest | 38,860,000               | 56,323,000     | 39,124,000     |
| Provision for income taxes                                     | 15,723,000               | 21,896,000     | 18,085,000     |
| Minority interest (income) expense                             | (5,000)                  | 8,000          | 36,000         |
| Net income   | \$ 23,142,000            | \$ 34,419,000  | \$ 21,003,000  |
| Basic net income per common share                              | \$ 0.16                  | \$ 0.24        | \$ 0.15        |
| Diluted net income per common share                            | \$ 0.16                  | \$ 0.24        | \$ 0.14        |
| Shares used in computing basic net income per common share     | 144,795,000              | 142,962,000    | 142,040,000    |
| Shares used in computing diluted net income per common share   | 145,787,000              | 145,055,000    | 145,071,000    |



The accompanying notes are an integral part of these consolidated financial statements.

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**Table of Contents****QIAGEN N.V. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF SHAREHOLDERS EQUITY AND COMPREHENSIVE INCOME**

|  | Common Shares      |                     | Additional<br>Paid-In<br>Capital | Retained<br>Earnings  | Accumulated<br>Other<br>Comprehensive<br>Income (Loss) | Total<br>Shareholders<br>Equity |
|--|--------------------|---------------------|----------------------------------|-----------------------|--|---------------------------------|
|  | Shares             | Amount              |                                  |                       |  |                                 |
| <b>BALANCE AT DECEMBER 31, 1999</b>  | <b>140,815,063</b> | <b>\$ 1,435,000</b> | <b>\$ 58,120,000</b>             | <b>\$ 41,856,000</b>  | <b>\$ (4,539,000)</b>                                  | <b>\$ 96,872,000</b>            |
| Net income   |                    |                     |                                  | 21,003,000            |  | 21,003,000                      |
| Unrealized gain, net on marketable securities                              |                    |                     |                                  |                       | 6,133,000  | 6,133,000                       |
| Translation adjustment   |                    |                     |                                  |                       | (1,995,000)  | (1,995,000)                     |
| Comprehensive income   |                    |                     |                                  |                       |  | 25,141,000                      |
| Exercise of stock options  | 1,117,424          | 10,000              | 4,458,000                        |                       |  | 4,468,000                       |
| Private placement of common stock  | 616,000            | 5,000               | 16,284,000                       |                       |  | 16,289,000                      |
| Finders fees paid by Operon shareholders                                   |                    |                     | 3,850,000                        |                       |  | 3,850,000                       |
| Tax benefit in connection with nonqualified stock options                  |                    |                     | 20,736,000                       |                       |  | 20,736,000                      |
| <b>BALANCE AT DECEMBER 31, 2000</b>  | <b>142,548,487</b> | <b>1,450,000</b>    | <b>103,448,000</b>               | <b>62,859,000</b>     | <b>(401,000)</b>                                       | <b>167,356,000</b>              |
| Net income   |                    |                     |                                  | 34,419,000            |  | 34,419,000                      |
| Unrealized loss, net on marketable securities                              |                    |                     |                                  |                       | (3,606,000)  | (3,606,000)                     |
| Realized gain, net on marketable securities                                |                    |                     |                                  |                       | (1,296,000)  | (1,296,000)                     |
| Translation adjustment   |                    |                     |                                  |                       | (3,575,000)  | (3,575,000)                     |
| Comprehensive income   |                    |                     |                                  |                       |  | 25,942,000                      |
| Exercise of stock options  | 862,914            | 8,000               | 4,081,000                        |                       |  | 4,089,000                       |
| Common stock issued for intangible asset                                   | 52,399             |                     | 746,000                          |                       |  | 746,000                         |
| Tax benefit in connection with nonqualified stock options                  |                    |                     | 14,842,000                       |                       |  | 14,842,000                      |
| <b>BALANCE AT DECEMBER 31, 2001</b>  | <b>143,463,800</b> | <b>1,458,000</b>    | <b>123,117,000</b>               | <b>97,278,000</b>     | <b>(8,878,000)</b>                                     | <b>212,975,000</b>              |
| Net income   |                    |                     |                                  | 23,142,000            |  | 23,142,000                      |
| Unrealized loss, net on marketable securities                              |                    |                     |                                  |                       | (2,044,000)  | (2,044,000)                     |
| Realized loss, net on marketable securities                                |                    |                     |                                  |                       | 38,000   | 38,000                          |
| Translation adjustment   |                    |                     |                                  |                       | 17,470,000   | 17,470,000                      |
| Comprehensive income   |                    |                     |                                  |                       |  | 38,606,000                      |
| Exercise of stock options  | 538,114            | 5,000               | 2,325,000                        |                       |  | 2,330,000                       |
| Reclass of tax benefit related to vested stock options                     |                    |                     | (14,617,000)                     |                       |  | (14,617,000)                    |
| Common stock issued in connection with the acquisition of Xeragon, Inc.    | 561,123            | 5,000               | 7,950,000                        |                       |  | 7,955,000                       |
| Common stock issued in connection with the acquisition of GenoVision, A.S. | 930,426            | 9,000               | 13,874,000                       |                       |  | 13,883,000                      |
| Common stock issued for intangible asset                                   | 40,126             | 1,000               | 249,000                          |                       |  | 250,000                         |
| Tax benefit in connection with nonqualified stock options                  |                    |                     | 1,649,000                        |                       |  | 1,649,000                       |
| <b>BALANCE AT DECEMBER 31, 2002</b>  | <b>145,533,589</b> | <b>\$ 1,478,000</b> | <b>\$ 134,547,000</b>            | <b>\$ 120,420,000</b> | <b>\$ 6,586,000</b>                                    | <b>\$ 263,031,000</b>           |



The accompanying notes are an integral part of these consolidated financial statements.

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Table of ContentsQIAGEN N.V. AND SUBSIDIARIESCONSOLIDATED STATEMENTS OF CASH FLOWS

|   | Years ended December 31, |                   |                   |
|---|--------------------------|-------------------|-------------------|
|   | 2002                     | 2001              | 2000              |
| <b>Cash Flows From Operating Activities:</b>                                      |                          |                   |                   |
| Net income  | \$ 23,142,000            | \$ 34,419,000     | \$ 21,003,000     |
| Adjustments to reconcile net income to net cash provided by operating activities: |                          |                   |                   |
| Depreciation and amortization   | 24,709,000               | 15,059,000        | 11,066,000        |
| Noncash closure costs   | 7,882,000                |                   |                   |
| Finders fees paid by Operon shareholders  |                          |                   | 3,850,000         |
| In-process research and development   | 1,200,000                |                   |                   |
| Tax effect from non-qualified stock options                                       | 1,649,000                | 14,842,000        | 20,736,000        |
| Reclass of tax benefit related to vested options                                  | (14,617,000)             |                   |                   |
| Provision for losses on accounts receivable                                       | 631,000                  | 1,363,000         | 189,000           |
| Deferred income taxes   | 5,027,000                | (1,789,000)       | (5,642,000)       |
| (Gain) loss on disposition of property and equipment                              | 2,000                    | (39,000)          | (55,000)          |
| (Gain) loss on sale of marketable securities                                      | 38,000                   | (1,296,000)       |                   |
| Loss on sale of investment  |                          |                   | 30,000            |
| Loss on equity method investee  | 1,340,000                | 1,373,000         | 870,000           |
| Minority interest   | (5,000)                  | 8,000             | 36,000            |
| Net changes in operating assets and liabilities:                                  |                          |                   |                   |
| (Increase) decrease in:   |                          |                   |                   |
| Notes receivable  | (83,000)                 | (959,000)         | (1,685,000)       |
| Accounts receivable   | (6,909,000)              | (7,888,000)       | (10,950,000)      |
| Income taxes receivable   | 543,000                  | (674,000)         | (1,682,000)       |
| Inventories   | (18,183,000)             | (3,926,000)       | (6,882,000)       |
| Prepaid expenses and other  | (601,000)                | (4,660,000)       | (750,000)         |
| Other assets  | (1,563,000)              | (228,000)         | (1,750,000)       |
| Increase (decrease) in:   |                          |                   |                   |
| Accounts payable  | (424,000)                | 2,349,000         | 4,992,000         |
| Accrued liabilities   | 3,155,000                | 4,913,000         | 5,645,000         |
| Income taxes payable  | 9,778,000                | 6,995,000         | 1,565,000         |
| Other   | (25,000)                 | (1,775,000)       | 81,000            |
| Net cash provided by operating activities   | <u>36,686,000</u>        | <u>58,087,000</u> | <u>40,667,000</u> |
| <b>Cash Flows From Investing Activities:</b>                                      |                          |                   |                   |
| Purchases of property, plant and equipment  | (59,136,000)             | (102,067,000)     | (40,651,000)      |
| Proceeds from sale of equipment   | 1,440,000                | 274,000           | 372,000           |
| Purchases of intangible assets  | (2,130,000)              | (1,159,000)       | (440,000)         |
| Purchases of investments  | (189,000)                | (1,515,000)       | (568,000)         |
| Sales of investments  |                          | 85,000            | 184,000           |
| Purchases of marketable securities  |                          | (1,565,000)       | (28,861,000)      |
| Sales of marketable securities  | 10,958,000               | 16,310,000        | 23,647,000        |
| Loan to related party   | (1,675,000)              | (1,778,000)       |                   |
| Collection of related party note receivable                                       |                          | 617,000           |                   |

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|  |                     |              |              |
|--|---------------------|--------------|--------------|
| Cash paid for acquisitions, net of cash acquired | <b>(14,060,000)</b> |              |              |
| Net cash used in investing activities            | <b>(64,792,000)</b> | (90,798,000) | (46,317,000) |

The accompanying notes are an integral part of these consolidated financial statements.

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Table of ContentsQIAGEN N.V. AND SUBSIDIARIESCONSOLIDATED STATEMENTS OF CASH FLOWS(CONTINUED)

|  | Years ended December 31, |                      |                      |
|--|--------------------------|----------------------|----------------------|
|  | 2002                     | 2001                 | 2000                 |
| <b>Cash Flows From Financing Activities:</b>                 |                          |                      |                      |
| Proceeds from lines of credit                                |                          | 23,543,000           | 14,092,000           |
| Repayment of lines of credit                                 | (5,757,000)              | (18,375,000)         | (14,182,000)         |
| Proceeds from short-term debt                                |                          |                      | 935,000              |
| Repayment of short-term debt                                 | (295,000)                | (5,763,000)          | (1,924,000)          |
| Principal payments on capital leases                         | (1,366,000)              | (1,085,000)          | (1,144,000)          |
| Proceeds from long-term debt                                 | 13,140,000               | 63,885,000           | 9,224,000            |
| Repayment of long-term debt                                  | (1,929,000)              | (3,649,000)          | (1,474,000)          |
| Repayment of acquisition note payable                        |                          |                      | (12,000,000)         |
| Proceeds from loan convertible to grant                      |                          | 3,600,000            |                      |
| Issuance of common shares                                    | 2,330,000                | 4,089,000            | 20,757,000           |
| <b>Net cash provided by financing activities</b>             | <b>6,123,000</b>         | <b>66,245,000</b>    | <b>14,284,000</b>    |
| Effect of exchange rate changes on cash and cash equivalents | 10,416,000               | (1,082,000)          | 139,000              |
| Net increase (decrease) in cash and cash equivalents         | (11,567,000)             | 32,452,000           | 8,773,000            |
| Cash and cash equivalents, beginning of year                 | 56,460,000               | 24,008,000           | 15,235,000           |
| <b>Cash and cash equivalents, end of year</b>                | <b>\$ 44,893,000</b>     | <b>\$ 56,460,000</b> | <b>\$ 24,008,000</b> |
| <b>Supplemental Cash Flow Disclosures:</b>                   |                          |                      |                      |
| Cash paid for interest                                       | \$ 4,083,000             | \$ 1,113,000         | \$ 1,489,000         |
| Cash paid for taxes  | \$ 13,731,000            | \$ 2,086,000         | \$ 2,558,000         |
| <b>Noncash Investing and Financing Activities:</b>           |                          |                      |                      |
| Common stock issued for intangible asset                     | \$ 250,000               | \$ 746,000           | \$                   |
| Equipment purchased through capital leases                   | \$ 21,000                | \$ 502,000           | \$ 2,525,000         |
| <b>Acquisitions of:</b>                                      |                          |                      |                      |
| Net assets and liabilities assumed                           | \$ 5,119,000             | \$                   | \$                   |
| Developed technology and know-how                            | \$ 8,600,000             | \$                   | \$                   |
| Goodwill   | \$ 8,164,000             | \$                   | \$                   |

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|                                     |                      |    |    |
|-------------------------------------|----------------------|----|----|
| In-process research and development | <b>\$ 1,200,000</b>  | \$ | \$ |
| Issuance of common stock            | <b>\$ 21,883,000</b> | \$ | \$ |

The accompanying notes are an integral part of these consolidated financial statements.

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**QIAGEN N.V. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**DECEMBER 31, 2002**

1. Description of Business

QIAGEN N.V. and Subsidiaries (the Company) operates exclusively in the life sciences industry developing, producing and distributing biotechnology products and services, primarily for the separation and purification of nucleic acids (DNA/RNA). In addition we manufacture and market synthetic nucleic acids. The Company's products are used in biological research by universities and research institutions as well as in genome sequencing, diagnostic and therapeutic industries. The Company's products are sold throughout the world, primarily in the United States, Europe and Japan. Similar to most companies in this line of business, the Company's products are subject to rapid technological change. Because of these technological changes, the Company needs to continuously expend resources toward research and development.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements were prepared in conformity with accounting principles generally accepted in the United States (GAAP) and include the accounts of the Company and its wholly and majority owned subsidiaries, after elimination of all significant intercompany accounts and transactions. Investments in affiliated companies that are 50 percent or less owned and where the Company exercises significant influence over the operations are accounted for using the equity method. All other investments are accounted for under the cost method.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on deposit in banks and other cash invested temporarily in various instruments that are short-term and highly liquid. The Company maintains its cash accounts in highly qualified institutions.

Marketable Securities

The Company accounts for marketable securities in accordance with Statement of Financial Accounting Standard (SFAS) No. 115, Accounting for Certain Investments in Debt and Equity Securities. All investments are stated at fair value, interest income is accrued when earned, and changes in market values are reflected as unrealized gains and losses, calculated on the specific identification method, as a component of accumulated other comprehensive income or loss.

Accounts Receivable

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The Company's accounts receivable are unsecured and the Company is at risk to the extent such amounts become uncollectible. The Company continually monitors account receivable balances, and provides for an allowance for doubtful accounts at the time collection may become questionable based on payment history or age of the receivable. Write-offs of accounts receivable totaled \$253,000, \$248,000 and \$120,000 while provisions for doubtful accounts totaled \$631,000, \$1.4 million and \$189,000 for the years ended December 31, 2002, 2001 and 2000. As of December 31, 2002 and 2001, no single customer represented more than ten percent of accounts receivable or consolidated net sales.

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**Table of Contents****Inventories**

Inventories are stated at the lower of cost, determined on a first-in, first-out basis, or market and consist of the following as of December 31, 2002 and 2001:

|                          | 2002                 | 2001                 |
|--------------------------|----------------------|----------------------|
| Raw materials            | \$ 13,535,000        | \$ 8,786,000         |
| Work in process          | 16,310,000           | 8,352,000            |
| Finished goods           | 26,268,000           | 14,745,000           |
| <b>Total inventories</b> | <b>\$ 56,113,000</b> | <b>\$ 31,883,000</b> |

**Property, Plant and Equipment**

Property, plant and equipment, including equipment under capital lease, are stated at cost. Depreciation is computed using the straight-line and declining balance methods over the estimated useful lives of the assets (one to 40 years). Leasehold improvements are computed on a straight-line basis over the lesser of the remaining life of the lease or the estimated useful life. The Company has a policy of capitalizing expenditures that materially increase assets' useful lives and charging ordinary maintenance and repairs to operations as incurred. When property or equipment is disposed of, the cost and related accumulated depreciation and amortization are removed from the accounts and any gain or loss is included in other miscellaneous income.

**Long-Lived Assets**

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or a group of assets may not be recoverable. The Company considers a history of operating losses or a change in expected sales levels to be indicators of potential impairment. Assets are grouped and evaluated for impairment at the lowest level for which there are identified cash flows that are largely independent of the cash flows of other groups of assets. The Company deems an asset to be impaired if a forecast of undiscounted projected future operating cash flows directly related to the asset, including disposal value, if any, is less than its carrying amount. If an asset is determined to be impaired, the loss is measured as the amount by which the carrying amount of the asset exceeds fair value. The Company generally measures fair value by discounting projected future cash flows. Considerable management judgment is necessary to estimate discounted future cash flows. Accordingly, actual results could differ from such estimates.

**Revenue Recognition**

The Company recognizes revenue in accordance with the Securities and Exchange Commission's Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements (SAB 101), as amended by SAB 101A and 101B. SAB 101 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Revenue from consumable product sales is generally recognized upon shipments, when all of the criteria of SAB 101 are achieved. The Company maintains a small amount of consignment inventory at certain customer locations. Revenues for the consumable products, which are consigned in this manner, are recognized upon consumption. Further, at one subsidiary location, consumable revenues are recognized upon delivery (FOB destination). Revenue from instrumentation equipment is not recognized until title passes to the customer, either upon shipment in the case of sales to distributors (FOB shipping point), or written customer acceptance in the case of sales to end users after satisfying any installation and training requirements. For instrumentation equipment sales that contain other obligations, such as providing consumables, advanced training, extended warranty services or preventative maintenance contracts, revenue is allocated based on the relative fair values of the

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individual components as determined by list prices. If cash sales prices are not available for individual components, then the sales value is deferred until all individual components are delivered or performed. Revenues for extended warranty services or product maintenance contracts are recognized on a straight-line basis over the contract period in accordance with the Financial Accounting Standards Board (FASB) Technical Bulletin 90-1. We generally recognize sequencing and other service revenues on a completed contract basis. For the years ended December 31, 2002, 2001 and 2000, revenues from the sale of all services constitute less than 10 percent of total net sales.

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### Shipping and Handling Income and Costs

The Company accounts for income and costs related to shipping and handling activities in accordance with the Emerging Issues Task Force Issue No. 00-10, Accounting for Shipping and Handling Revenues and Costs. Income from shipping and handling is included with revenue from product sales. Associated costs of shipping and handling are included in sales and marketing expenses. For the years ended December 31, 2002, 2001 and 2000, shipping and handling costs totaled \$12.6 million, \$9.3 million and \$7.1 million, respectively.

### Advertising Costs

The Company accounts for advertising costs according to Statement of Position 93-7, Reporting on Advertising Costs, (SOP 93-7). Accordingly, the costs of advertising are expensed as incurred. Sales materials, such as brochures and catalogues, are accounted for as prepaid supplies and expensed over the expected period of use. Advertising costs for the years ended December 31, 2002, 2001 and 2000 were \$2.9 million, \$2.2 million and \$1.7 million, respectively.

### Warranty

The Company warrants its products against defects in materials and workmanship for a period of one year. A provision for estimated future warranty is recorded when consumables are shipped and when title on instrumentation equipment passes to the customer.

### Foreign Currency Translation

The Company's reporting currency is the U.S. dollar. The subsidiaries' functional currencies are primarily the local currency of the respective country. Balance sheets prepared in their functional currencies are translated to the reporting currency at exchange rates in effect at the end of the accounting period except for shareholders' equity accounts, which are translated at rates in effect when these balances were originally recorded. Revenue and expense accounts are translated at a weighted average of exchange rates during the period. The cumulative effect of translation is included in accumulated other comprehensive income (loss) in the accompanying consolidated balance sheets.

### Fair Value of Financial Instruments

The carrying value of the Company's cash and cash equivalents, notes receivable, accounts receivable, accounts payable and accrued liabilities approximate their fair values because of the short maturities of those instruments. The carrying value of the Company's debt and capital leases approximate their fair values because of the short maturities and/or interest rates which are comparable to those available to the Company on similar terms.

### Financial Instruments

In the ordinary course of business, the Company purchases foreign currency exchange options to manage potential losses from foreign currency exposures. These options give the Company the right, but not the requirement, to purchase foreign currencies in exchange for U.S. dollars at predetermined exchange rates. The principal objective of such options is to minimize the risks and/or costs associated with global financial and operating activities. The Company does not utilize financial instruments for trading or other speculative purposes. The Company accounts for these transactions in accordance with SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. Premiums to purchase foreign exchange options are recorded as prepaid assets and amortized over the life of the option or immediately if the option is exercised. Amortization is included in other miscellaneous expense.

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The table below presents the notional amounts and the weighted average exchange rates for foreign currency exchange options as of December 31, 2002 and 2001. The options outstanding at December 31, 2002 expire at various dates through February 2003 and have a fair market value of approximately \$27,000. The options outstanding at December 31, 2001 expired at various dates through February 2002 and had a fair market value of approximately \$6,000. Gains or losses from changes in the fair market values are included in other miscellaneous income, net.

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| Functional Currency: | 2002                |                  | 2001                |                  |
|----------------------|---------------------|------------------|---------------------|------------------|
|                      | Notional Weighted   |                  | Notional Weighted   |                  |
|                      | Notional            | Average Exchange | Notional            | Average Exchange |
|                      | Amount              | Rate             | Amount              | Rate             |
| European Union euro  | \$ 5,600,000        | 1.0600           | \$ 5,600,000        | 1.0000           |
| Swiss franc          |                     |                  | 1,200,000           | 1.5500           |
|                      | <b>\$ 5,600,000</b> |                  | <b>\$ 6,800,000</b> |                  |

Stock-Based Compensation

At December 31, 2002, the Company has a stock option plan, which is described more fully in Note 15. The Company accounts for the plan under the recognition and measurement principles of Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees, and related Interpretations. No stock-based employee compensation cost is reflected in net income, as all options granted under the plan had an exercise price equal to the market value of the underlying common stock on the date of grant. The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of FASB Statement No. 123, Accounting for Stock-Based Compensation, to stock-based employee compensation.

|   | 2002                 | 2001                 | 2000                |
|---|----------------------|----------------------|---------------------|
| Net income, as reported   | \$ 23,142,000        | \$ 34,419,000        | \$ 21,003,000       |
| Deduct: Total stock-based employee compensation expense determined under the fair value based method for all awards, net of related tax effects | (5,689,000)          | (7,848,000)          | (12,948,000)        |
| Proforma net income   | <b>\$ 17,453,000</b> | <b>\$ 26,571,000</b> | <b>\$ 8,055,000</b> |
| Earnings per share:   |                      |                      |                     |
| Basic-as reported   | \$ 0.16              | \$ 0.24              | \$ 0.15             |
| Basic-proforma  | \$ 0.12              | \$ 0.19              | \$ 0.06             |
| Diluted-as reported   | \$ 0.16              | \$ 0.24              | \$ 0.14             |
| Diluted-proforma  | \$ 0.12              | \$ 0.18              | \$ 0.06             |

Risks and Uncertainties

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Authoritative Pronouncements

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On December 31, 2002, the FASB issued SFAS No. 148, Accounting For Stock-Based Compensation - Transition and Disclosure. SFAS No. 148 provides additional guidance for those entities that elect to voluntarily adopt the accounting provisions of SFAS 123, Accounting For Stock-Based Compensation. The Company has elected not to voluntarily adopt the fair value based method of accounting for stock-based compensation in 2002. If the Company should choose to adopt such a method in the future, its implementation pursuant to SFAS No. 148 could have a material effect on the Company's consolidated financial position and results of operations. The Company included the required disclosures in this annual report.

In July 2002, the FASB issued Statement of Financial Accounting Standards (SFAS) No. 146, Accounting for Costs Associated with Exit or Disposal Activities. SFAS No. 146 requires that a liability be recognized for exit and disposal costs only when the liability has been incurred and when it can be measured at fair value. The statement is effective for exit and disposal activities that are initiated after December 31, 2002, with earlier

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adoption encouraged. The Company adopted this statement for the year ended December 31, 2002 in association with the exit and disposal activities of the QIAGEN Genomics facility in Bothell, Washington.

In April 2002, the FASB issued SFAS No. 145, Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections. In addition to amending or rescinding other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions, SFAS No. 145 precludes companies from recording gains and losses from the extinguishment of debt as an extraordinary item. The statement is effective January 1, 2003 and is not anticipated to have any impact on the Company's financial position, results of operations or cash flows.

In June 2001, the FASB issued SFAS No. 141, Business Combinations effective June 30, 2001 for business combinations that are consummated after July 1, 2001. SFAS No. 141 eliminated the pooling-of-interests method for business combinations and requires use of the purchase method.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations. SFAS No. 143 requires entities to record the fair value of a liability for an asset retirement obligation in the period in which the obligation is incurred. When the liability is initially recorded, the entity capitalizes the cost by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted to its present value each period, and the capitalized cost is depreciated over the useful life of the related asset. This statement is effective on January 1, 2003 with earlier application encouraged. The Company is currently reviewing this statement and has not yet determined its impact, if any, on the Company's financial position, results of operations or cash flows.

### 3. Stock Split and Par Value Currency Conversion

The Company effected a four-for-one stock split during 2000. On June 16, 2000 the shareholders of the Company approved the amendment of the Company's Articles of Association to increase the number of authorized shares of common stock from 65 million to 260 million. The Company's Board of Supervisory Directors and Managing Board approved the split in May 2000. Common shareholders of record on July 3, 2000 received three additional shares for each share held on that date. The additional shares were distributed and the stock split was effective on July 13, 2000.

All share data and per share amounts presented have been restated to reflect the stock split.

### 4. Net Income per Common Share

The following schedule summarizes the information used to compute earnings per common share:

|  | Years ended December 31, |             |             |
|--|--------------------------|-------------|-------------|
|  | 2002                     | 2001        | 2000        |
| Weighted average number of common shares used to compute basic net income per common share   | <b>144,795,000</b>       | 142,962,000 | 142,040,000 |
| Dilutive effect of stock options   | <b>992,000</b>           | 2,093,000   | 3,031,000   |
| Weighted average number of common shares used to compute diluted net income per common share | <b>145,787,000</b>       | 145,055,000 | 145,071,000 |

For the years ended December 31, 2002, 2001 and 2000, stock options to purchase 5,730,000, 1,845,000 and 864,000 shares, respectively, were excluded from the dilutive effect of stock options as such options were antidilutive.

5. Acquisitions

On June 14, 2002, the Company completed the acquisition of GenoVision A.S. and subsidiaries. GenoVision A.S. was formed in 1998 and is located in Oslo, Norway. Subject to the terms of the acquisition agreement, the Company paid approximately \$14.3 million in cash and issued 930,426 shares of common stock (valued at approximately \$13.9 million) in exchange for all the capital stock of GenoVision A.S. The Company has agreed to pay an earn-out of up to \$3.0 million based on GenoVision's performance in the twelve months following the acquisition. In connection with this merger, the Company expensed costs of approximately \$2.8 million, which include \$1.2 million of in-process research and development and \$1.6 million for equipment impairment. The Company believes that the acquisition will provide QIAGEN with unique, automated solutions for the purification of nucleic acids based on GenoVision's proprietary magnetic particle

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technologies. The acquisition, accounted for as a purchase under SFAS No. 141, included the purchase of all of the stock of GenoVision A.S., which, including acquisition costs, resulted in a total purchase price of \$29.5 million. A portion of the purchase price has been allocated to the assets acquired and liabilities assumed based on the estimated fair market value. Independent appraisers utilizing proven valuation procedures and techniques determined the value of the intangible assets acquired. These intangible assets include acquired in-process research and development, developed technology and know-how, and goodwill. As a result of the appraisal, \$3.6 million was allocated to developed technology and will be amortized straight line over ten years, \$700,000 was allocated for contractual worldwide rights of sequence specific primers for gene-based tissue typing, and will be amortized on a straight line basis over three and one-half years, and approximately \$18.9 million was allocated to goodwill. A charge of \$1.2 million for purchased in-process research and development was included in the Company's 2002 results. This charge represents the estimated fair value based on risk-adjusted cash flows related to the in-process research and development projects. At the date of acquisition, the development of these projects had not yet reached technological feasibility and the research and development in progress had no alternative future uses. The results of GenoVision operations prior to the date of acquisition were not significant. The results of operations of the acquired company are included in the consolidated results for the Company from the date of acquisition.

On April 17, 2002, the Company completed the acquisition of Xeragon, Inc. of Huntsville, Alabama, pursuant to an agreement and plan of merger with Xeragon dated as of March 28, 2002. In connection with this acquisition, the Company issued 561,123 common shares valued at \$8.0 million, to the shareholders of Xeragon in exchange for all of the outstanding capital stock of Xeragon. The acquisition qualifies as a tax-free reorganization under U.S. income tax provisions. Established in 2001, Xeragon is a market and technology leader for products and services focusing on synthetic nucleic acids, particularly siRNA. The acquisition, accounted for as a purchase under SFAS No. 141, included the purchase of all of the stock of Xeragon, Inc., which, including acquisition costs, resulted in a total purchase price of \$8.2 million. A portion of the purchase price has been allocated to the assets acquired and liabilities assumed based on the estimated fair market value at April 17, 2002. These intangible assets include developed technology and goodwill. As a result of the appraisal, \$4.0 million was allocated to developed technology and will be amortized on a straight line basis over ten years, \$300,000 was allocated to non-compete agreements to be amortized straight line over three years, and approximately \$3.8 million was allocated to goodwill. The results of operations of the acquired company are included in the consolidated results for the Company from the date of acquisition. Since Xeragon, Inc. was established late in 2001, the results of operations prior to the date of acquisition were not significant.

On March 31, 2001, the Company completed the acquisition of the Sawady Group of companies (Sawady) located in Tokyo, Japan. Under the terms of the agreement QIAGEN N.V. issued 854,987 shares of its common stock, valued at the time of the closing at approximately \$18.0 million, in exchange for all of the outstanding capital stock of Sawady Technology Co., Ltd., Omgen Co., Ltd. and a majority position in Accord Co., Ltd., the three companies comprising the Sawady Group of companies. To date, the minority interest position in Accord Co., Ltd. has not been significant. The Sawady Group of companies was managed and structured as one organization, but was organized as three companies to meet the tax planning and other preferences of its shareholders. In connection with this merger, the Company recorded acquisition and related charges of approximately \$3.0 million, which include approximately \$1.0 million of direct transaction costs (primarily legal and other professional fees) and approximately \$2.0 million of expenses primarily relating to the relocation, closure and elimination of leased facilities, such as duplicate field offices. Sawady has since been renamed QIAGEN Sciences K.K.

The merger was accounted for as a pooling of interests and, accordingly, the accompanying financial statements and footnotes have been restated to include the operations of Sawady for 2001 and 2000. For the years ended December 31, 2001 (January 1, 2001 through March 31, 2001, the date of the merger) and 2000, the Sawady revenues were approximately \$2.8 million and \$12.8 million, respectively. For the years ended December 31, 2001 (January 1, 2001 through March 31, 2001, the date of the merger) and 2000, the Sawady net income was approximately \$144,000 and \$897,000, respectively.

On June 28, 2000, the Company completed the acquisition of Operon Technologies, Inc. (Operon) of Alameda, California, pursuant to an agreement and plan of merger with Operon Technologies dated as of June 9, 2000. Under the agreement, Operon shareholders received 2,392,432 shares of QIAGEN common stock for all outstanding shares of Operon stock. The Company also assumed outstanding Operon options, which were exercisable for an additional 422,024 Company shares. Operon Technologies manufactures and markets synthetic nucleic

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acids, DNA microarrays and synthetic genes. The synthetic nucleic acids are used in the analysis of nucleic acids purified from natural sources and have been integrated into the Company's product line for its genomics and genetic analysis business.

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The acquisition of Operon was accounted for as a pooling of interests in accordance with APB Opinion No. 16 and related Securities and Exchange Commission pronouncements. In connection with the acquisition, the Company incurred costs of \$5.4 million. These costs include approximately \$3.9 million of finder fees for the investment banker chosen by the shareholders of Operon. This fee was not paid for by the Company, but by the Operon shareholders. However, in accordance with the accounting rules for a pooling of interests transaction, this expense is reflected in the financial statements. The acquisition costs also include approximately \$1.0 million in Netherlands capital tax, which is based on the amount of capital raised in share issuances. The prior periods financial data of the Company have been restated to include the results of operations, financial position and cash flows of Operon, as though it had always been consolidated. For the year ended December 31, 2000 (January 1, 2000 through June 28, 2000, the date of the merger), the Operon revenues were approximately \$9.8 million. For the year ended December 31, 2000 (January 1, 2000 through June 28, 2000, the date of the merger), the Operon net income was approximately \$767,000.

**6. Facility Closure and Relocation**

During December 2002, the Company decided to close the QIAGEN Genomics site in Bothell, Washington and to relocate several of the site's activities to other locations, mainly to the recently opened facilities in Germantown, Maryland and Hilden, Germany. As a result of the closure and related re-focus of this business, the Company expensed approximately \$10.8 million of which \$2.1 million is included in accrued liabilities at December 31, 2002. Closure and related costs consist of severance for 59 terminated employees, and other costs of \$2.7 million, and a non-cash write off of facilities and equipment and other assets of \$4.7 million and intangible assets, including developed technology and goodwill of \$3.2 million. Additional costs in 2003 associated with the closure are estimated to be approximately \$1.3 million, primarily for lease termination. The closure and relocation is intended to be completed in the second quarter of 2003. After the closure of the Bothell facility, the Masscode intellectual property will continue to serve as an important technology base for tagging nucleic acids and proteins. The Company will also shift its focus from selling the benefits of this technology as a service to supporting its technology access partners in the United States and Japan with the products and accessories necessary to ensure ongoing functionality of their SNP genotyping systems.

**7. Comprehensive Income**

SFAS No. 130, Reporting Comprehensive Income, requires that comprehensive income, which is the total of net income and all other non-owner changes in equity, be displayed in the financial statements. The components of the Company's comprehensive income or loss as presented in the Consolidated Statements of Shareholders' Equity include net income, unrealized gains and losses from foreign currency translation, and unrealized gains and losses from available-for-sale marketable securities. The Company does not expect any tax impacts from realized gains or losses on marketable securities. The following table is a summary of the components of accumulated other comprehensive income (loss):

|  | <u>2002</u>         | <u>2001</u>           |
|--|---------------------|-----------------------|
| Net unrealized (loss) gain on marketable securities  | <b>\$ (942,000)</b> | \$ 1,064,000          |
| Foreign currency translation adjustments             | <b>7,528,000</b>    | (9,942,000)           |
| <b>Accumulated other comprehensive income (loss)</b> | <b>\$ 6,586,000</b> | <b>\$ (8,878,000)</b> |

**8. Marketable Securities**

At December 31, 2002 and 2001, the investments in the following table are classified as current, as the Company's plan is generally not to hold its investments until maturity to take advantage of market conditions.

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The contractual maturities of corporate debt securities at December 31, 2002 and 2001 are as follows:

|                        | 2002                 |                      | 2001                 |                      |
|------------------------|----------------------|----------------------|----------------------|----------------------|
|                        | Cost                 | Fair Value           | Cost                 | Fair Value           |
| <u>Maturities due:</u> |                      |                      |                      |                      |
| One to five years      | \$ 10,046,000        | \$ 10,044,000        | \$ 6,007,000         | \$ 5,995,000         |
| Five to ten years      |                      |                      | 15,040,000           | 15,028,000           |
| Over ten years         | 1,500,000            | 1,486,000            | 1,500,000            | 1,489,000            |
|                        | <b>\$ 11,546,000</b> | <b>\$ 11,530,000</b> | <b>\$ 22,547,000</b> | <b>\$ 22,512,000</b> |

At December 31, 2002, the gross unrealized gains on these securities were \$12,000 and the gross unrealized losses were \$28,000. Unrealized gains and losses, net of any realized amounts are included in other comprehensive income or loss.

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The Company holds 224,000 shares in Genome Pharmaceuticals Corporation AG (GPC), and since the Company intends to hold these shares for more than one year, the investment is classified as a long-term marketable security. At December 31, 2002, these shares had a fair market value of \$735,000 with a gross unrealized loss of \$926,000 included in other comprehensive income or loss as the Company has evaluated many factors and considers the decline in value temporary. During 2001, the Company entered into a securities lending arrangement with Deutsche Bank and transferred 20,000 shares of GPC to Deutsche Bank in January 2002. The Company is restricted from selling the 20,000 shares during the lending period, which expires in January 2004. The Company retains all other rights to the shares and Deutsche Bank guarantees the return of the shares after the lending period.

For the years ended December 31, 2002, 2001 and 2000, proceeds from sales of available-for-sale securities totaled \$11.0 million, \$16.3 million and \$23.6 million, respectively, and calculated on the specific identification method, realized losses during 2002 totaled \$38,000 and realized gains during 2001 totaled \$1.3 million. There were no realized gains or losses during 2000.

9. **Property, Plant and Equipment**

Property, plant and equipment are summarized as follows as of December 31, 2002 and 2001:

|   | 2002                  | 2001           |
|---|-----------------------|----------------|
| Land and buildings                              | <b>\$ 128,581,000</b> | \$ 28,317,000  |
| Machinery and equipment                         | <b>69,564,000</b>     | 37,144,000     |
| Computer software                               | <b>18,005,000</b>     | 7,893,000      |
| Furniture and office equipment                  | <b>34,867,000</b>     | 21,110,000     |
| Leasehold improvements                          | <b>9,816,000</b>      | 5,015,000      |
| Construction in progress                        | <b>18,336,000</b>     | 103,612,000    |
|   | <b>279,169,000</b>    | 203,091,000    |
| Less: Accumulated depreciation and amortization | <b>(67,256,000)</b>   | (42,726,000)   |
| Property, plant and equipment, net              | <b>\$ 211,913,000</b> | \$ 160,365,000 |

For the years ended December 31, 2002, 2001 and 2000 depreciation expense totaled \$21.4 million, \$12.9 million and \$9.6 million, respectively. Repairs and maintenance expense was \$4.2 million, \$2.8 million and \$1.8 million in fiscal years 2002, 2001 and 2000, respectively.

At December 31, 2002 and 2001, construction in progress includes costs directly allocable to construction and capitalized interest of \$16.9 million and \$89.5 million, respectively, directly related to the construction of the Company's new research and manufacturing facility, QIAGEN Sciences, Inc. located in Germantown, Maryland and the new production and administration buildings at QIAGEN GmbH in Hilden, Germany. Interest capitalized in accordance with SFAS No. 34 for the years ended December 31, 2002 and 2001 totaled \$1.1 million and \$2.2 million, respectively.

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Additionally, during 2001, QIAGEN Sciences, Inc. received State and County loans totaling \$3.6 million to be used for the land purchase and facility construction costs. Upon QIAGEN Sciences, Inc. achieving certain employment levels, these loans are permanently forgiven. Upon conversion, the grant will be recorded as a reduction to the cost of the assets. Should the criteria not be met, the loan becomes payable. At December 31, 2002, \$2.0 million of the loan had been converted to a grant as determined by the ratio of the actual employment level to the target level. The balance of \$1.6 million is included in other long-term liabilities in the accompanying balance sheet.

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**Table of Contents**10. Investments

The Company has made strategic investments in certain companies that are accounted for using the equity or cost method of accounting. A summary of these investments as of December 31, 2002 and 2001 is as follows:

| Company        | Percent Control | Equity Investment | Share of loss      |            |                                 |              |            |
|----------------|-----------------|-------------------|--------------------|------------|---------------------------------|--------------|------------|
|                |                 |                   | As of December 31, |            | for the year ended December 31, |              |            |
|                |                 |                   | 2002               | 2001       | 2002                            | 2001         | 2000       |
| PreAnalytiX AG | 50.0%           | CHF 1,504,000     | \$ 1,088,000       | \$ 907,000 | \$ 1,340,000                    | \$ 1,373,000 | \$ 835,000 |
| ENPharma L.P.  | 12.3%           | CAD 250,000       |                    |            |                                 |              | \$ 35,000  |

During 2000, the Company sold its 12.3 percent interest in ENPharma for book value, approximately \$100,000.

| Company                         | Percent Control | Cost Investment |              |
|---------------------------------|-----------------|-----------------|--------------|
|                                 |                 | 2002            | 2001         |
| Zeptosens AG                    | 18.6%           | \$ 2,589,000    | \$ 2,589,000 |
| Coley Pharmaceutical Group, Inc | 8.0%            | \$ 1,414,000    | \$ 1,414,000 |
| QBM Cell Science                | 19.5%           | \$ 613,000      | \$ 613,000   |
| Ingenium Pharmaceuticals AG     | 0.9%            | \$ 511,000      | \$ 511,000   |

From time to time, the Company has transactions with the above entities all of which are individually and in sum immaterial (under \$250,000 in sales by the Company to Zeptosens, Coley, QBM and Ingenium as a group) except for certain transactions with the joint venture PreAnalytiX. The transactions with PreAnalytiX are summarized as follows:

|                     | As of or for the year ended December 31, |              |
|---------------------|--|--------------|
|                     | 2002                                     | 2001         |
| Sales               | \$ 1,367,000                             | \$ 1,554,000 |
| Loan receivable     | \$ 4,048,000                             | \$ 1,808,000 |
| Accounts receivable | \$ 921,000                               | \$ 444,000   |
| Accounts payable    | \$ 130,000                               | \$ 9,000     |

To date, both joint venture partners each loaned CHF 5.6 million to the venture at a 4.0% interest rate. It is anticipated that both joint venture partners will convert the loan balances to additional capital at some future date.

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The Company periodically reviews the carrying value of these investments for impairment, considering factors such as the most recent stock transactions and book value from the most recent financial statements. These investments are included in other assets in the accompanying consolidated balance sheets.

### 11. Intangible Assets

In June 2001, the FASB issued SFAS No. 142, Goodwill and Other Intangible Assets. SFAS No. 142 addresses how intangible assets should be accounted for upon their acquisition as well as how goodwill and other intangible assets should be accounted for after they have been initially recognized in the financial statements. With the adoption of this statement on January 1, 2002, goodwill and indefinite life intangibles are no longer subject to amortization over the estimated useful life. Elimination of goodwill amortization would not have had a material impact on net income or earnings per share of any of the periods presented and, as a result, the transitional disclosures of adjusted net income excluding goodwill amortization described by SFAS No. 142 have not been presented. Goodwill will be assessed for impairment each year using the fair-value-based test.

The following sets forth the intangible assets by major asset class as of December 31, 2002 and December 31, 2001:

|                                       | 2002                        |                             | 2001                        |                             |
|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                                       | Gross<br>Carrying<br>Amount | Accumulated<br>Amortization | Gross<br>Carrying<br>Amount | Accumulated<br>Amortization |
| <b>Amortized Intangible assets:</b>   |                             |                             |                             |                             |
| Patent and license rights             | \$ 7,930,000                | \$ (2,855,000)              | \$ 4,323,000                | \$ (1,728,000)              |
| Developed technology                  | 8,203,000                   | (528,000)                   | 3,200,000                   | (914,000)                   |
|                                       | \$ 16,133,000               | \$ (3,383,000)              | \$ 7,523,000                | \$ (2,642,000)              |
| <b>Unamortized Intangible assets:</b> |                             |                             |                             |                             |
| Goodwill                              | \$ 25,569,000               |                             | \$ 2,259,000                |                             |

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The weighted average lives are 6 and 9 years for patent and license rights and developed technology, respectively.

The changes in the carrying amount of goodwill, by segment, for the year ended December 31, 2002 are as follows:

|  | Norway               | United States       | Japan               | Germany           | Total                |
|--|----------------------|---------------------|---------------------|-------------------|----------------------|
| Balance at December 31, 2001           | \$                   | \$ 1,199,000        | \$ 1,060,000        | \$                | \$ 2,259,000         |
| Acquisitions                           | 18,904,000           | 3,758,000           |                     | 277,000           | 22,939,000           |
| Effect of foreign currency translation | 1,419,000            |                     | 129,000             | 22,000            | 1,570,000            |
| Impairment due to site closure         |                      | (1,199,000)         |                     |                   | (1,199,000)          |
| <b>Balance at December 31, 2002</b>    | <b>\$ 20,323,000</b> | <b>\$ 3,758,000</b> | <b>\$ 1,189,000</b> | <b>\$ 299,000</b> | <b>\$ 25,569,000</b> |

The Company has completed the fair-value based test for impairment of goodwill and intangible assets. As a result of the closure of the Genomics facility, the balances of \$1.2 million of goodwill and \$1.8 million of developed technology were written off and included in closure and related costs in the accompanying consolidated statement of income for the year ended December 31, 2002.

Amortization expense on intangible assets totaled approximately \$1.9 million and \$1.5 million, respectively, for the years ended December 31, 2002 and 2001. Amortization of intangibles for the next five years is expected to be approximately:

|      |    |           |
|------|----|-----------|
| 2003 | \$ | 1,696,000 |
| 2004 | \$ | 1,587,000 |
| 2005 | \$ | 1,397,000 |
| 2006 | \$ | 1,217,000 |
| 2007 | \$ | 1,250,000 |

In connection with the adoption of SFAS No. 142, the useful lives of intangibles are assessed for adequacy considering the contract life as well as the period of time over which the intangible will contribute to future cash flow. The unamortized cost of intangible assets is evaluated periodically and adjusted, if necessary, if later events and circumstances indicate that a permanent decline in value below the current unamortized historical cost has occurred. Through December 31, 2001, for intangibles acquired before June 30, 2001, all patents and licensing rights were amortized straight line over periods of three to seven years. The Company recognized amortization expense relating to patents and licensing rights of \$509,000 and \$450,000 for the years ended December 31, 2001 and 2000, respectively.

## 12. Income Taxes

Under SFAS No. 109, deferred income tax assets or liabilities are computed based on the temporary difference between the financial statement and income tax bases of assets and liabilities using the enacted marginal income tax rate in effect for the year in which the differences are expected to reverse. Deferred income tax expenses or credits are based on the changes in the deferred income tax assets or liabilities from period to period.

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The Company has recorded a net deferred tax asset of \$8.6 million at December 31, 2002. Realization is dependent on generating sufficient taxable income in the future. Although realization is not assured, management believes it is more likely than not that all of the net deferred tax asset will be realized. To the extent that future valuation allowances are required, the effect of the allowance will be recorded in the provision for income taxes in the period the determination is made.

The components of the net deferred tax asset at December 31, 2002 and 2001 are as follows:

|                                  | <u>2002</u>         | <u>2001</u>          |
|----------------------------------|---------------------|----------------------|
| Deferred tax asset:              |                     |                      |
| Allowance for bad debts          | \$ 597,000          | \$ 541,000           |
| Bonus/commission accrual         | 175,000             | 155,000              |
| Vacation accrual                 | 322,000             | 368,000              |
| Warranty accrual                 | 181,000             | 103,000              |
| Accrued liabilities              | 803,000             | 1,506,000            |
| Depreciation and amortization    | 540,000             | 346,000              |
| Tax credits                      | 592,000             | 460,000              |
| Net operating loss carryforward  | 7,387,000           | 4,864,000            |
| Inventories                      | 3,782,000           | 3,940,000            |
| Deferred revenues                | 834,000             | 521,000              |
| Capitalized start-up costs       | 1,575,000           | 1,660,000            |
| Capital leases                   |                     | 327,000              |
| Other                            | 790,000             | 149,000              |
|                                  | <u>17,578,000</u>   | <u>14,940,000</u>    |
| Deferred tax liability:          |                     |                      |
| Depreciation and amortization    | (2,351,000)         | (146,000)            |
| Devaluation of Intercompany loan | (3,554,000)         |                      |
| Inventory                        | (1,013,000)         | (346,000)            |
| Accrued liabilities              | (144,000)           | (313,000)            |
| Intangibles                      | (965,000)           | (990,000)            |
| United States state income taxes | (771,000)           | (247,000)            |
| Other                            | (160,000)           | (381,000)            |
|                                  | <u>(8,958,000)</u>  | <u>(2,423,000)</u>   |
| Net deferred tax assets          | <u>\$ 8,620,000</u> | <u>\$ 12,517,000</u> |



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Deferred tax assets and liabilities are reflected on the Company's consolidated balance sheets at December 31, 2002 and 2001 as follows:

|                                  | 2002          | 2001          |
|----------------------------------|---------------|---------------|
| Current deferred tax asset       | \$ 11,629,000 | \$ 11,123,000 |
| Current deferred tax liabilities | (6,035,000)   | (410,000)     |
| Non-current deferred tax asset   | 3,026,000     | 1,804,000     |
| Net deferred tax assets          | \$ 8,620,000  | \$ 12,517,000 |

As of December 31, 2002 and 2001, the Company had a net operating loss (NOL) carryforward in the U.S. of approximately \$5.3 million and \$8.6 million, respectively. These NOLs were generated primarily from the exercise of employee stock options and operating losses that were acquired with the purchase of Rapigene, Inc. (now QIAGEN Genomics, Inc.). These NOLs will expire in various years through 2020. Federal tax law limits the use of NOLs from QIAGEN Genomics, Inc., which amount to \$1.6 million and \$2.2 million at December 31, 2002 and 2001, respectively. In addition, the Company had state NOLs equal to approximately \$5.7 million and \$1.4 million at December 31, 2002 and 2001, respectively. These NOLs expire at various times through 2005.

As of December 31, 2002 and 2001, the Company had NOL carryforwards outside of the U.S. totaling approximately \$18.3 million and \$6.9 million, respectively. These NOLs were primarily generated from operating losses from the Company's newer subsidiaries. At December 31, 2002, a portion of these NOLs, approximately \$10.9 million, expires in various years through 2012. The balance does not expire. At December 31, 2002 and 2001, the Company's foreign holding company also had an NOL of \$2.3 million with a full valuation allowance. This NOL does not expire.

Income before income taxes for the years ended December 31, 2002, 2001 and 2000 consisted of:

|                                 | Years Ended December 31, |               |               |
|---------------------------------|--------------------------|---------------|---------------|
|                                 | 2002                     | 2001          | 2000          |
| United States pretax income     | \$ 2,962,000             | \$ 6,611,000  | \$ 4,191,000  |
| Non-United States pretax income | 35,898,000               | 49,712,000    | 34,933,000    |
|                                 | \$ 38,860,000            | \$ 56,323,000 | \$ 39,124,000 |

The provisions for income taxes for the years ended December 31, 2002, 2001 and 2000 are as follows:

Years Ended December 31,

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|                                      | 2002                 | 2001                 | 2000                 |
|--------------------------------------|----------------------|----------------------|----------------------|
|                                      | <u>          </u>    | <u>          </u>    | <u>          </u>    |
| Current United States federal taxes  | \$ 312,000           | \$ 1,602,000         | \$ 4,165,000         |
| United States state taxes            | 1,147,000            | 1,005,000            | 1,184,000            |
| Non-United States taxes              | 10,318,000           | 21,078,000           | 14,182,000           |
|                                      | <u>11,777,000</u>    | <u>23,685,000</u>    | <u>19,531,000</u>    |
| Deferred United States federal taxes | 1,074,000            | 391,000              | (987,000)            |
| United States state taxes            | (252,000)            | (190,000)            | (210,000)            |
| Non-United States taxes              | 3,124,000            | (1,990,000)          | (249,000)            |
|                                      | <u>3,946,000</u>     | <u>(1,789,000)</u>   | <u>(1,446,000)</u>   |
| Total provision for income taxes     | <u>\$ 15,723,000</u> | <u>\$ 21,896,000</u> | <u>\$ 18,085,000</u> |

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Differences between the provision for income taxes and income taxes at the United States statutory federal income tax rate for the years ended December 31, 2002, 2001 and 2000 are as follows:

|  | Years Ended December 31, |              |                      |              |                      |              |
|--|--------------------------|--------------|----------------------|--------------|----------------------|--------------|
|  | 2002                     |              | 2001                 |              | 2000                 |              |
|  | Amount                   | Percent      | Amount               | Percent      | Amount               | Percent      |
| Income taxes at United States statutory federal rate                               | \$ 13,213,000            | 34.0%        | \$ 19,150,000        | 34.0%        | \$ 13,302,000        | 34.0%        |
| United States state income taxes, net of federal income tax effect                 | 389,000                  | 1.0%         | 509,000              | 0.9%         | 320,000              | 0.8%         |
| Non-United States taxes at rates greater than United States statutory federal rate | 900,000                  | 2.3%         | 2,186,000            | 3.9%         | 2,103,000            | 5.4%         |
| Nondeductible acquisition costs  |                          |              |                      |              | 2,142,000            | 5.5%         |
| Nondeductible goodwill amortization  | 446,000                  | 1.2%         | 56,000               | 0.1%         | 60,000               | 0.1%         |
| Nondeductible purchased in-process research & development                          | 336,000                  | 0.9%         |                      |              |                      |              |
| Other items, net   | 439,000                  | 1.1%         | (5,000)              | 0.0%         | 158,000              | 0.4%         |
| <b>Total provision for income taxes</b>  | <b>\$ 15,723,000</b>     | <b>40.5%</b> | <b>\$ 21,896,000</b> | <b>38.9%</b> | <b>\$ 18,085,000</b> | <b>46.2%</b> |

13. Accrued Liabilities

Accrued liabilities at December 31, 2002 and 2001 consist of the following:

|                                  | 2002                 | 2001                 |
|----------------------------------|----------------------|----------------------|
| Royalties                        | \$ 6,188,000         | \$ 5,487,000         |
| Payroll and related accruals     | 5,649,000            | 3,899,000            |
| Deferred revenue                 | 3,180,000            | 1,286,000            |
| Sales and other taxes            | 2,116,000            | 1,716,000            |
| Closure and related costs        | 2,103,000            |                      |
| Professional and other fees      | 1,640,000            | 3,277,000            |
| Prepaid VAR discount             | 1,526,000            | 1,550,000            |
| Warranty                         | 1,327,000            | 887,000              |
| Acquisition and related costs    | 1,225,000            |                      |
| Management bonuses               | 745,000              | 539,000              |
| Checks in excess of cash balance | 287,000              | 308,000              |
| Other                            | 2,045,000            | 1,286,000            |
| <b>Total accrued liabilities</b> | <b>\$ 28,031,000</b> | <b>\$ 20,235,000</b> |

14. Lines of Credit and Debt

The Company has six separate lines of credit amounting to \$7.7 million of which approximately \$935,000 was utilized at December 31, 2002. Interest rates on amounts drawn against these lines of credit outstanding as of December 31, 2002 ranged from 4.75 percent to 7.25 percent, with an effective weighted average rate of 5.92 percent. Some of the lines of credit, \$1.0 million, may be called without notice, and are collateralized by accounts receivable and equipment. The availability of total credit is reduced by approximately \$482,000 due to guarantees made against one of the credit facilities. At December 31, 2001 the Company had \$281,000 of short-term borrowings outstanding. The weighted average interest rate on these borrowings was 1.88 percent. There were no short-term borrowings outstanding at December 31, 2002. Interest expense on line of credit and short-term borrowings was \$115,000, \$302,000 and \$170,000 for the years ended December 31, 2002, 2001 and 2000, respectively.

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Long-term debt consists of the following:

|  | 2002                 | 2001          |
|--|----------------------|---------------|
| 3.75% note due in semi-annual payments of EUR 639,000 (approximately \$670,000 at December 31, 2002) with a final payment due in March 2009                              | <b>\$ 8,711,000</b>  | \$ 8,533,000  |
| Note payable bearing interest at EURIBOR (2.75% at December 31, 2002) plus 1.2%, due in one final payment of in July 2005  | <b>44,887,000</b>    | 18,135,000    |
| Note payable bearing interest at LIBOR (1.45% at December 31, 2002) plus 1.28%, due in one final payment of EUR 50,000,000 July 2005                                     | <b>43,475,000</b>    | 44,505,000    |
| Four notes payable totaling JPY 90,102,000 at December 31, 2001, bearing interest at various rates ranging from 0.49% to 2.33% with various due dates through March 2006 |                      | 685,000       |
| <b>Total long-term debt</b>  | <b>97,073,000</b>    | 71,858,000    |
| Less current portion of long-term debt   | <b>1,340,000</b>     | 1,138,000     |
| <b>Long-term portion of long-term debt</b>   | <b>\$ 95,733,000</b> | \$ 70,720,000 |

The two notes due in July 2005 are part of the loan facilities obtained in 2001 from a group of banks led by Deutsche Bank, that allow the Company to borrow up to a total of EUR 50.0 million and \$43.5 million. The loan agreements contain certain financial and non-financial covenants, including but not limited to the encumbrance of land and accounts receivable, restriction on the transfer of any patents to third parties and the maintenance of certain financial ratios. The Company was in compliance with these covenants at December 31, 2002. The proceeds of these facilities are primarily dedicated to the refinancing of previously made acquisitions of land and the construction of manufacturing, research and administrative facilities thereon.

Future principal maturities of long-term debt as of December 31, 2002 are as follows:

| Year ending December 31, |                      |
|--------------------------|----------------------|
| 2003                     | \$ 1,340,000         |
| 2004                     | 1,340,000            |
| 2005                     | 89,702,000           |
| 2006                     | 1,340,000            |
| 2007                     | 1,340,000            |
| Thereafter               | 2,011,000            |
|                          | <b>\$ 97,073,000</b> |

Interest expense, net of capitalized interest of approximately \$3.2 million and \$2.2 million in 2002 and 2001, respectively, on long-term debt was \$1.7 million, \$321,000 and \$604,000 for the years ended December 31, 2002, 2001 and 2000, respectively.

15. Stock Options

On April 30, 1996, the Company adopted the QIAGEN N.V. 1996 Employee, Director and Consultant Stock Option Plan (the Option Plan). The Option Plan allows for incentive stock options, as well as for non-qualified options, generally with terms of 10 years, subject to earlier termination in certain situations. Generally, the options vest over a three-year period. The vesting and exercisability of certain options will be accelerated in the event of a Change of Control, as defined. The exercise price of the options is determined by the Board or by the Compensation Committee, and to date all grants have been at the market value on the date of the grant. The Company has reserved 18,968,000 shares of common stock for issuance under this plan.

In connection with the acquisition of Operon (see Note 5), the Company exchanged 422,024 QIAGEN options for all of the outstanding options of Operon. These exchanged options vest over 4 years.

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Information regarding the Option Plan as of December 31, 2000, 2001 and 2002, and changes during the years then ended is summarized as follows:

|                          | Option<br>Shares  | Weighted Average<br>Exercise Price |
|--------------------------|-------------------|------------------------------------|
| December 31, 1999        | 6,505,292         | \$ 6.17                            |
| Granted                  | 1,898,562         | 37.22                              |
| Exercised                | (1,117,424)       | 4.23                               |
| Forfeited                | (285,413)         | 16.59                              |
| December 31, 2000        | 7,001,017         | \$ 14.47                           |
| Granted                  | 2,713,415         | 21.11                              |
| Exercised                | (862,914)         | 4.82                               |
| Forfeited                | (619,861)         | 33.97                              |
| December 31, 2001        | 8,231,657         | \$ 16.28                           |
| Granted                  | 4,468,457         | 9.65                               |
| Exercised                | (538,114)         | 4.59                               |
| Forfeited                | (903,220)         | 20.40                              |
| <b>December 31, 2002</b> | <b>11,258,780</b> | <b>\$ 13.88</b>                    |

At December 31, 2002, 2001 and 2000, 5,108,991, 3,969,284 and 3,269,928 options were exercisable at a weighted average price of \$13.72, \$9.64 and \$4.63 per share, respectively. The weighted average fair value of options granted during 2002, 2001 and 2000 was \$5.18, \$14.38 and \$28.38, respectively. The options outstanding at December 31, 2002 expire in various years through 2012. Information about stock options outstanding at December 31, 2002 is summarized as follows:

| Range of<br>Exercise Prices | Number<br>Outstanding<br>at 12/31/02 | Weighted<br>Average<br>Remaining<br>Contract Life | Weighted<br>Average<br>Exercise<br>Price | Number<br>Exercisable<br>at 12/31/02 | Weighted<br>Average<br>Exercise<br>Price |
|-----------------------------|--------------------------------------|---|--|--------------------------------------|--|
|                             |                                      |   |  |                                      |  |
| \$ 4.63 - \$ 6.70           | 1,777,643                            | 8.84 Years  | \$ 5.55                                  | 392,747                              | \$ 5.66                                  |
| \$ 6.75 - \$ 8.77           | 1,633,059                            | 7.41 Years  | \$ 7.78                                  | 997,559                              | \$ 8.34                                  |
| \$ 8.77 - \$14.89           | 1,670,082                            | 7.90 Years  | \$ 11.81                                 | 872,370                              | \$ 9.97                                  |

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|                   |            |            |          |           |          |
|-------------------|------------|------------|----------|-----------|----------|
| \$15.06 - \$18.56 | 1,622,854  | 9.02 Years | \$ 16.46 | 264,773   | \$ 17.75 |
| \$18.88 - \$26.40 | 1,706,533  | 8.14 Years | \$ 21.52 | 702,333   | \$ 21.62 |
| \$27.50 - \$49.75 | 1,173,841  | 7.65 Years | \$ 38.87 | 719,266   | \$ 39.58 |
|                   |            |            |          |           |          |
| \$ 0.97 - \$49.75 | 11,258,780 | 7.80 Years | \$ 13.88 | 5,108,991 | \$ 13.72 |

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions used for the grants: weighted average risk-free interest rates of 3.44 percent, 4.33 percent and 6.25 percent and a weighted average expected life of six years for the years ended December 31, 2002, 2001 and 2000, respectively. The weighted average expected volatility was 76 percent, 75 percent and 84 percent, for the years ended December 31, 2002, 2001 and 2000, respectively. It is assumed that no dividends would be issued during the option term.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. Option value models also require the input of highly subjective assumptions such as expected option life and expected stock price volatility. Because the Company's stock-based compensation plans have characteristics significantly different from those of traded options and because changes in the subjective input assumptions can materially affect the fair value estimate, the Company believes that the existing option valuation model does not necessarily provide a reliable single measure of the fair value of awards from this plan.



**Table of Contents**16. Commitments and Contingenciesa. Lease Commitments

The Company leases facilities and equipment under operating lease arrangements expiring in various years through 2018. Certain facility and equipment leases constitute capital leases. The accompanying consolidated financial statements include the assets and liabilities arising from these capital lease obligations.

Minimum future obligations under capital and operating leases at December 31, 2002 are as follows:

|                                    | <u>Capital Leases</u> | <u>Operating Leases</u> |
|------------------------------------|-----------------------|-------------------------|
| 2003                               | \$ 1,697,000          | \$ 5,862,000            |
| 2004                               | 1,491,000             | 4,038,000               |
| 2005                               | 1,349,000             | 1,631,000               |
| 2006                               | 1,095,000             | 203,000                 |
| 2007                               | 1,049,000             | 149,000                 |
| Thereafter                         | 11,530,000            | 725,000                 |
|                                    | <u>18,211,000</u>     | <u>\$ 12,608,000</u>    |
| Less: Amount representing interest | (6,105,000)           |                         |
|                                    | <u>12,106,000</u>     |                         |
| Less: Current portion              | (999,000)             |                         |
|                                    | <u>\$ 11,107,000</u>  |                         |

Rent expense under noncancelable operating lease agreements was \$7.9 million, \$6.6 million and \$5.8 million for the years ended December 31, 2002, 2001 and 2000, respectively.

b. Purchase Commitments

At December 31, 2002, the Company had commitments with several vendors to purchase certain products during 2003, 2004 and 2005 totaling approximately \$14.7 million, \$9.3 million and \$400,000, respectively.

c. Commitments

In connection with the acquisition of GenoVision A.S. and subsidiaries, discussed more fully in Note 5, the Company agreed to pay an earn-out of up to \$3.0 million based on GenoVision's performance in the twelve months following the acquisition. As of December 31, 2002, the Company anticipates that the full earn-out will be paid in the second half of 2003.

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Further construction is under way at the Company's North American manufacturing and research and development headquarters, QIAGEN Sciences, Inc., in Germantown, Maryland, for a siRNA/RNA research and development lab and production space, as well as additional office space. These additional facilities are expected to be completed in the first quarter of 2003 at a cost of approximately \$3.1 million of which approximately \$1.7 million had been incurred at December 31, 2002.

Additionally, the Company's construction activities at QIAGEN GmbH in Germany were substantially completed during 2002. The estimated costs for these new facilities is approximately \$58.0 million, of which \$57.3 million had been incurred at December 31, 2002.

In October 1998, the Company announced that it had signed a five-year supply agreement with Abbott Laboratories (Abbott). According to the agreement, the Company will supply Abbott with various proprietary nucleic acid sample purification and preparation products. Under the terms of this agreement, Abbott has committed to certain purchases of the Company's products over the term of the contract. The Company has committed to certain expansions of its production capacity and product quality and has received payments for such achievements.

### d. Contingencies

From time to time the Company may be party to legal proceedings incidental to its business. Certain claims, suits or complaints arising out of the normal course of business have been filed or were pending against the Company.

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Although it is not possible to predict the outcome of such litigation, based on the facts known to the Company and after consultation with legal counsel, management believes that such litigation will not have a material adverse effect on its financial position or results of operations.

During the normal course of business, the Company is subject to audit by taxing authorities for varying periods in various tax jurisdictions. During June 2001, a tax audit in Germany for the years 1994 through 1997 was concluded. The Company has received notification that the taxing authorities are examining the treatment of expenses related to stock options, which are required to be accrued when vested under the German Commercial Code, due to a reimbursement agreement between QIAGEN N.V. and QIAGEN GmbH which requires that QIAGEN GmbH make payments to QIAGEN N.V. of an amount equal to the spread on stock option exercises. Based on the advice received from tax experts and its tax advisors, the Company has accrued for the expense of the stock options in the statutory financial statements and in the German tax returns, but such expenses are not recorded in the consolidated financial statements prepared under U.S. GAAP. The matter being examined by the taxing authorities is whether the option expenses are deductible for tax purposes on an accrual basis or only on a payment basis upon the exercise of the options. Accordingly, should the taxing authorities ultimately conclude that the stock option expenses are not deductible for tax purposes on an accrual basis, there would be no income statement impact or impact on earnings per share to the Company's U.S. GAAP financial statements although the Company may be required to make additional tax payments, the amount of which cannot be determined at this time, but the Company estimates that it could range from zero to approximately \$12.0 million. The Company believes its position will be upheld.

17. Employee Benefits

In September 1992, QIAGEN, Inc. (Valencia) adopted the QIAGEN, Inc. Employees 401(k) Savings Plan (the Plan). The purpose of the Plan is to provide retirement benefits to all eligible employees, which include employees of QIAGEN, Inc., QIAGEN Sciences, Inc. and QIAGEN Genomics, Inc. Matching contributions and profit sharing contributions may be made to the Plan at the discretion of the Board of Directors. In 2002, 2001 and 2000, total matching contributions to the Plan were approximately \$293,000, \$701,000 and \$600,000, respectively.

Operon adopted a defined contribution plan effective January 1, 1994, benefiting substantially all Operon employees. Operon may make matching contributions at the discretion of the Board of Directors. In 2002, 2001 and 2000 matching contributions to the plan totaled approximately \$272,000, \$144,000 and \$108,000, respectively.

As of December 31, 2002, QIAGEN GmbH has deferred compensation plans for one officer and one employee. The present value of the future compensation obligation of \$289,000, \$200,000 and \$171,000 has been accrued in the accompanying consolidated financial statements at December 31, 2002, 2001 and 2000, respectively.

During 1999, QIAGEN KK established a retirement plan for one officer. The employee is entitled to a lump sum distribution based on a formula tied to years of service. As such, an amount of \$295,000, \$215,000 and \$187,000 has been accrued in the accompanying consolidated financial statements at December 31, 2002, 2001 and 2000, respectively.

18. Licensing Agreements

The Company has licensing agreements with companies, universities and individuals, some of which require certain up-front payments. Royalty payments are required on net product sales ranging from one to ten percent of covered products. Several of these agreements have minimum royalty requirements. The accompanying consolidated financial statements include accrued royalties relating to these agreements in the amount of \$6.2 million and \$5.5 million at December 31, 2002 and 2001, respectively. Royalty expense relating to these agreements amounted to \$13.3

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million, \$10.0 million and \$7.8 million for the years ended December 31, 2002, 2001 and 2000, respectively. Royalty expense is primarily recorded in cost of sales, with a small portion recorded as research and development expense depending on the use of the technology under license. Some of these agreements also have minimum raw material purchase requirements and requirements to perform specific types of research.

### 19. Related Party Transactions

From time to time the Company may have transactions with companies in which the Company also holds an interest. See Notes 8 and 10 for discussion of these investments and transactions.

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In connection with its formation, QIAGEN K.K. entered into a service agreement with its minority shareholder. Pursuant to the agreement, the minority shareholder provided services such as stock keeping, order processing, and packing and shipping. As compensation for services provided, QIAGEN K.K. paid the minority shareholder a service fee equal to seven percent of the net revenues of QIAGEN K.K. For the year ended December 31, 2000, QIAGEN K.K. expensed to sales and marketing expense approximately \$1.1 million in service fees, of which \$96,000 is included in accrued liabilities at the end of fiscal 2000. The service agreement was terminated upon the Company's acquisition of the minority shareholder's interest in January 2001.

20. **Segment and Related Information**

The Company operates exclusively in the life sciences industry generating revenue from the sale of products and services for the separation and purification of nucleic acids. Reportable segments are based on the geographic locations of the subsidiaries.

The Company's reportable segments include the Company's production and manufacturing facilities in Germany, United States, Switzerland and Norway, and distribution subsidiaries in the United States, Switzerland, Japan, the United Kingdom and Other Countries (consisting of the Company's subsidiaries in Canada, France, Australia, Italy and Austria). The Company's holding company is located in the Netherlands. The Company produces and distributes biotechnology products and services, primarily for the separation and purification of nucleic acids (DNA/RNA). In addition, the Company manufactures and markets synthetic nucleic acids. The reportable segments derive revenues from all of the Company's product and service offerings. It is not practicable to provide a detail of revenues for each group of similar products and services offered by the Company.

The Company evaluates performance based on several factors, of which the primary financial measure is operating income. The accounting policies of the segments are the same as those described in the summary of significant accounting policies in Note 2 of the Notes to Consolidated Financial Statements.

Summarized financial information concerning the Company's reportable segments is shown in the following tables:

|                          | <u>2002</u>           | <u>2001</u>           | <u>2000</u>           |
|--------------------------|-----------------------|-----------------------|-----------------------|
| <b><u>Net Sales</u></b>  |                       |                       |                       |
| Germany                  | \$ 136,334,000        | \$ 121,744,000        | \$ 99,408,000         |
| United States            | 221,762,000           | 147,609,000           | 119,925,000           |
| Switzerland              | 30,953,000            | 27,898,000            | 23,490,000            |
| Japan                    | 34,937,000            | 34,417,000            | 35,038,000            |
| United Kingdom           | 19,252,000            | 16,282,000            | 12,004,000            |
| Norway                   | 1,859,000             |                       |                       |
| Other Countries          | 27,871,000            | 17,844,000            | 15,484,000            |
|                          | <u>472,968,000</u>    | <u>365,794,000</u>    | <u>305,349,000</u>    |
| Subtotal                 | 472,968,000           | 365,794,000           | 305,349,000           |
| Intersegment Elimination | (174,361,000)         | (102,024,000)         | (88,547,000)          |
|                          | <u>\$ 298,607,000</u> | <u>\$ 263,770,000</u> | <u>\$ 216,802,000</u> |
| Total                    | \$ 298,607,000        | \$ 263,770,000        | \$ 216,802,000        |

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Net sales are attributed to countries based on the location of the Company's subsidiary. During 2002, 2001 and 2000, no single customer represented more than ten percent of consolidated net sales. United States export sales did not exceed ten percent of consolidated net sales during fiscal 2002, 2001 or 2000.

|                                  | 2002             | 2001             | 2000            |
|----------------------------------|------------------|------------------|-----------------|
| <b><u>Intersegment Sales</u></b> |                  |                  |                 |
| Germany                          | \$ (86,432,000)  | \$ (80,277,000)  | \$ (70,359,000) |
| United States                    | (65,754,000)     | (5,198,000)      | (2,744,000)     |
| Switzerland                      | (20,454,000)     | (15,752,000)     | (11,496,000)    |
| Japan                            | (60,000)         | (797,000)        | (3,893,000)     |
| Norway                           | (1,471,000)      |                  |                 |
| Other Countries                  | (190,000)        |                  | (55,000)        |
|                                  | \$ (174,361,000) | \$ (102,024,000) | \$ (88,547,000) |

All intersegment sales are accounted for by a formula based on local list prices and eliminated in consolidation.

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| Operating Income (Loss)  | 2002                 | 2001          | 2000          |
|--------------------------|----------------------|---------------|---------------|
| Germany                  | <b>\$ 28,573,000</b> | \$ 30,914,000 | \$ 23,157,000 |
| United States            | <b>4,802,000</b>     | 10,326,000    | 6,807,000     |
| Switzerland              | <b>269,000</b>       | 4,119,000     | 4,742,000     |
| Japan                    | <b>7,090,000</b>     | 5,956,000     | 3,798,000     |
| United Kingdom           | <b>3,525,000</b>     | 3,566,000     | 2,431,000     |
| Norway                   | <b>(2,874,000)</b>   |               |               |
| Other Countries          | <b>2,410,000</b>     | 1,174,000     | 1,288,000     |
| The Netherlands          | <b>(2,326,000)</b>   | (2,611,000)   | (482,000)     |
| <b>Subtotal</b>          | <b>41,469,000</b>    | 53,444,000    | 41,741,000    |
| Intersegment elimination | <b>1,716,000</b>     | 32,000        | (5,208,000)   |
| <b>Total</b>             | <b>\$ 43,185,000</b> | \$ 53,476,000 | \$ 36,533,000 |

The Netherlands component of operating income (loss) is primarily general and administrative expenses. The intersegment elimination represents the elimination of intercompany profit.

| Depreciation and Amortization | 2002                 | 2001          | 2000          |
|-------------------------------|----------------------|---------------|---------------|
| Germany                       | <b>\$ 11,037,000</b> | \$ 6,926,000  | \$ 5,482,000  |
| United States                 | <b>10,817,000</b>    | 5,764,000     | 3,965,000     |
| Switzerland                   | <b>995,000</b>       | 371,000       | 269,000       |
| Japan                         | <b>707,000</b>       | 1,614,000     | 1,065,000     |
| United Kingdom                | <b>91,000</b>        | 107,000       | 103,000       |
| Norway                        | <b>412,000</b>       |               |               |
| Other Countries               | <b>278,000</b>       | 158,000       | 80,000        |
| The Netherlands               | <b>372,000</b>       | 119,000       | 102,000       |
| <b>Total</b>                  | <b>\$ 24,709,000</b> | \$ 15,059,000 | \$ 11,066,000 |

| Assets                   | 2002                  | 2001           |
|--------------------------|-----------------------|----------------|
| Germany                  | <b>\$ 243,411,000</b> | \$ 186,489,000 |
| United States            | <b>155,160,000</b>    | 129,015,000    |
| Switzerland              | <b>27,551,000</b>     | 19,480,000     |
| Japan                    | <b>29,128,000</b>     | 21,484,000     |
| United Kingdom           | <b>10,383,000</b>     | 6,475,000      |
| Norway                   | <b>31,877,000</b>     |                |
| Other Countries          | <b>17,474,000</b>     | 9,601,000      |
| The Netherlands          | <b>152,266,000</b>    | 122,318,000    |
| <b>Subtotal</b>          | <b>667,250,000</b>    | 494,862,000    |
| Intersegment Elimination | <b>(212,739,000)</b>  | (137,894,000)  |
| <b>Total</b>             | <b>\$ 454,511,000</b> | \$ 356,968,000 |

Assets of the Netherlands include cash and cash equivalents, investments, prepaid assets and certain intangibles. The intersegment elimination represents intercompany investments and advances.

At December 31, 2002 and 2001, the investment in equity method investees totaled (\$3,348,000) and (\$1,637,000) for Switzerland. These investments are included in the asset amounts presented above.

| Capital Expenditures | 2002                 | 2001           | 2000          |
|----------------------|----------------------|----------------|---------------|
| Germany              | <b>\$ 35,506,000</b> | \$ 44,420,000  | \$ 14,096,000 |
| United States        | <b>17,944,000</b>    | 53,477,000     | 24,188,000    |
| Switzerland          | <b>1,967,000</b>     | 3,401,000      | 552,000       |
| Japan                | <b>3,131,000</b>     | 305,000        | 1,472,000     |
| United Kingdom       | <b>97,000</b>        | 106,000        | 78,000        |
| Norway               | <b>239,000</b>       |                |               |
| Other Countries      | <b>252,000</b>       | 358,000        | 263,000       |
| The Netherlands      |                      |                | 2,000         |
| Total                | <b>\$ 59,136,000</b> | \$ 102,067,000 | \$ 40,651,000 |



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| Long-Lived Assets | 2002                  | 2001           |
|-------------------|-----------------------|----------------|
| Germany           | <b>\$ 117,144,000</b> | \$ 76,763,000  |
| United States     | <b>97,245,000</b>     | 84,275,000     |
| Switzerland       | <b>6,993,000</b>      | 4,433,000      |
| Japan             | <b>5,939,000</b>      | 3,358,000      |
| United Kingdom    | <b>167,000</b>        | 146,000        |
| Norway            | <b>22,435,000</b>     |                |
| Other Countries   | <b>2,017,000</b>      | 645,000        |
| The Netherlands   | <b>6,503,000</b>      | 8,213,000      |
| Total             | <b>\$ 258,443,000</b> | \$ 177,833,000 |

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**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

QIAGEN N.V.

By:

/s/ PEER M. SCHATZ

Dated: March 31, 2003

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**Peer M. Schatz,**

**Chief Financial Officer**

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QIAGEN N.V.

Exhibit Index

- 1.1 Articles of Association as confirmed by notarial deed as of July 6, 2000 (English translation) (6)
- 2.1 Credit Contract for a Club Deal between QIAGEN GmbH, Deutsche Bank AG, Stadtparkasse Dusseldorf, and IKB Deutsche Industriebank AG, dated May 28, 2001 (English Translation) (6)
- 2.2 Amended and Restated Guaranty Agreement between QIAGEN Sciences, Inc. and QIAGEN GmbH, dated February 28, 2002 (6)
- 2.3 Amended and Restated Promissory Note between QIAGEN Sciences, Inc. and QIAGEN North American Holdings, Inc., dated February 28, 2002 (6)
- 2.4 Amended and Restated Promissory Note between QIAGEN North American Holdings, Inc., and QIAGEN GmbH, dated February 28, 2002 (6)
- 2.5 Amended and Restated Indemnity Deed of Trust, between QIAGEN Sciences, Inc. and Richard Sugarman, dated February 28, 2002 (6)
- \*2.6 Third Supplement to the Credit Agreement for a Club Deal of May 28, 2001 between QIAGEN GmbH, Deutsche Bank AG, Stadtparkasse Dusseldorf, and IKB Deutsche Industriebank AG, dated July 31, 2002
- 4.1 Lease between QIAGEN, Inc. and Haserjian Bros. Realty Co., a California General Partnership, dated May 16, 1996 (Filed as Exhibit 10.1) (2)
- 4.2 Lease between QIAGEN GmbH and Brixton Estate Deutschland GmbH dated March 14, 1997 (the Albert-Einstein-Str. Lease (Filed as Exhibit 10.1(a)) (3)
- 4.3 The Albert-Einstein-Str. Lease Contract Summary (Filed as Exhibit 10.1(b)) (3)
- 4.4 Exercised Option to Extend Lease Between QIAGEN Inc. and Haserjian Bros. Realty Co., a California General Partnership, dated February 10, 1999. (Filed as Exhibit 10.1) (4)
- 4.5 Master Agreement among Becton, Dickinson and Company, Becton Dickinson Sample Collection GmbH, QIAGEN AG, and QIAGEN N.V., dated August 5, 1999 (Filed as Exhibit 10.1) (5)
- 4.6 Lease Between QIAGEN GmbH and Gisantus Grundstücksverwaltungsgesellschaft mbH, dated January 13, 1997 (the Max-Volmer-Strasse 4 Lease ) (Filed as Exhibit 10.3) (5)
- 4.7 The Max-Volmer-Strasse 4 Lease Summary (Filed as Exhibit 10.3(a)) (6)
- 4.8 Second Amendment to the Standard Industrial/Commercial Single-Tenant Lease Net Dated May 15, 1996, and the First Amendment Date for Reference Purposes as February 10, 1999, between QIAGEN, Inc. and Haserjian Bros. Realty Co., a California General Partnership (6)
- 4.9 Third Amendment to the Standard Industrial/Commercial Single-Tenant Lease-Net, dated October 4, 2001, between QIAGEN, Inc. and Haserjian Bros. Realty Co., a California General Partnership (6)

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- \*4.10 Managing Director Agreement by and between DIAGEN Institute for Molecular Biological Diagnostics GmbH. and Dr. Metin Colpan, dated August 30, 1985 (English Translation)
- \*4.11 Employment Agreement by and between DIAGEN Institute for Molecular Biological Diagnostics GmbH. and Mr. Peer M. Schatz, dated February 24, 1993 (English Translation)

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- \*4.12 Employment Agreement by and between QIAGEN AG and Peer M. Schatz, dated May 29, 1998 (English Translation)
- \*4.13 Employment Agreement between QIAGEN N.V. and Metin Colpan, dated October 5, 2000
- \*4.14 Employment Agreement between QIAGEN N.V. and Peer M. Schatz, dated October 5, 2000
- \*4.15 Agreement and Plan of Merger by and among QIAGEN N.V., Xenopus Merger Sub, Inc. and Xeragon, Inc. dated as of March 28, 2002
- \*4.16 Agreement on Acquisition of Shares and Subscription Rights in GenoVision AS by QIAGEN N.V. dated May 24, 2002.
- \*4.17 Change in Control Agreement between QIAGEN N.V. and Metin Colpan, as of September 30, 2002
- \*4.18 Change in Control Agreement between QIAGEN N.V. and Peer M. Schatz, as of September 30, 2002
- \*4.19 Letter between QIAGEN GmbH and Metin Colpan Regarding Addition of a Change in Control Provision, as of September 30, 2002 (English Translation)
- \*4.20 Letter between QIAGEN GmbH and Peer M. Schatz Regarding Addition of a Change in Control Provision, as of September 30, 2002 (English Translation)
- \*6.1 EPS Calculation Explanation
- \*8.1 List of Subsidiaries
- \*10.1 Consent of Ernst & Young LLP
- 10.3 QIAGEN N.V. 1996 Employee, Director and Consultant Stock Option Plan (1)
- \*99.1 Certification of Disclosure Pursuant to 17 C.F.R. 240.13a-14 or 15d-14 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 Metin Colpan, Managing Director and Chief Executive Officer
- \*99.2 Certification of Disclosure Pursuant to 17 C.F.R. 240.13a-14 or 15d-14 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 Peer M. Schatz, Managing Director and Chief Financial Officer
- \*99.3 Certification Pursuant to 18 U.S.C. Sections 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 Metin Colpan, Managing Director and Chief Executive Officer and Peer M. Schatz, Managing Director and Chief Financial Officer
- \*99.4 Press release dated February 18, 2003

\* Included in this filing

- (1) Incorporated by reference to Registration Statement of QIAGEN N.V. on Form F-1 filed with the Securities and Exchange Commission on May 30, 1996, as amended.
- (2) Incorporated by reference to Form 20-F Annual Report of QIAGEN N.V. filed with the Securities and Exchange Commission on May 27, 1997.
- (3) Incorporated by reference to Form 20-F Annual Report of QIAGEN N.V. filed with the Securities and Exchange Commission on May 21, 1998.
- (4) Incorporated by reference to Form 20-F Annual Report of QIAGEN N.V. filed with the Securities and Exchange Commission on March 31, 1999.

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- (5) Incorporated by reference to Form 20-F Annual Report of QIAGEN N.V. filed with the Securities and Exchange Commission on March 31, 2000.
  
- (6) Incorporated by reference to Form 20-F Annual Report of QIAGEN N.V. filed with the Securities and Exchange Commission on March 31, 2001.