

HOLOGIC INC
Form S-3ASR
July 27, 2006
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As filed with the Securities and Exchange Commission on July 27, 2006

Registration No. 333-_____

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM S-3
REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

HOLOGIC, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

04-2902449

(I.R.S. Employer Identification Number)

35 Crosby Drive

Bedford, Massachusetts 01730

(781) 999-7300

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

John M. Cumming

Chief Executive Officer

Hologic, Inc.

35 Crosby Drive

Bedford, Massachusetts 01730

(781) 999-7300

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Philip J. Flink, Esq.

Brown Rudnick Berlack Israels LLP

One Financial Center

Boston, MA 02111

(617) 856-8200

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

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

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

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

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

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

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

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered (1) | Proposed Maximum Offering Price Per Share (2) | Proposed Maximum Aggregate Offering Price (2) | Amount of Registration Fee |
|---|------------------------------------|--|--|-----------------------------------|
| Common Stock, par value \$.01 per share | 2,328,824 shares | \$ 44.37 | \$ 103,329,921 | \$ 11,056.30 |
| Rights to Purchase Preferred Stock(3) | 2,328,824 rights | | | |

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) under the Securities Act. The price per share and aggregate offering price are based on the average of the high and low prices of the registrant's common stock on July 21, 2006, as reported on the Nasdaq Global Select Market.
- (3) Pursuant to a Rights Agreement entered into on September 17, 2002, one right (each a "Right") is deemed to be delivered with each share of common stock issued by the registrant. The Rights currently are not separately transferable apart from the common stock, and they are not exercisable until the occurrence of certain events. Accordingly, no independent value has been attributed to the Rights.

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PROSPECTUS

HOLOGIC, INC.

2,328,824 Shares

Common Stock

This prospectus relates to the resale of up to 2,328,824 shares of our common stock by the selling stockholders listed in the section entitled **Selling Stockholders** beginning on page 17 of this prospectus. This prospectus may be supplemented from time to time by one or more prospectus supplements. The shares of common stock offered under this prospectus and any supplements by the selling stockholders were issued in connection with our acquisition of Suros Surgical Systems, Inc. pursuant to a merger agreement dated as of April 17, 2006. We are not selling any securities under this prospectus or its supplements and will not receive any of the proceeds from the sale of shares by the selling stockholders.

The selling stockholders may sell the shares of common stock described in this prospectus or its supplements in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell their shares of common stock in the section entitled **Plan of Distribution** on page 22 and in any supplements to this prospectus. We will not be paying any underwriting discounts or commissions in this offering.

Our common stock is traded on the Nasdaq Global Select Market under the symbol **HOLX**. The last reported sales price of the common stock on the Nasdaq Global Select Market on July 26, 2006 was \$47.34 per share.

Investing in our common stock involves risks and uncertainties. You should review carefully the risks and uncertainties described under the heading Risk Factors beginning on page 3 of this prospectus and under similar headings in each prospectus supplement and the other documents that are incorporated in this prospectus by reference.

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

The date of this prospectus is July 27, 2006.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus, and on the information contained in any prospectus supplements. We have not, and the selling stockholders have not, authorized anyone to provide you with information different from that contained in this prospectus or such supplements. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where it is lawful to do so. The information in this prospectus is accurate only as of the date of this prospectus, and the information in any prospectus supplement is accurate only as of the date of such supplement, regardless of the time of delivery of this prospectus or any such supplement or any sale of our common stock.

FORWARD-LOOKING STATEMENTS

This prospectus, any supplements to this prospectus and other documents that are and will be incorporated into this prospectus contain statements that involve expectations, plans or intentions (such as those relating to future business or financial results, new products or services, or management strategies). These statements are forward-looking and are subject to risks and uncertainties, so actual results may vary materially. You can identify these forward-looking statements by words such as may, should, expect, anticipate, believe, estimate, intend, plan and other similar expressions. You should consider our forward-looking statements in light of the risks discussed under the heading Risk Factors below and in documents incorporated herein by reference, including our consolidated financial statements, related notes and other financial information appearing in our other filings and documents incorporated herein by reference. Given these risks and uncertainties, we caution you not to place undue reliance on such forward-looking statements. The forward-looking statements contained in this prospectus speak only as of the date hereof and we assume no obligation to update such statements.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere or incorporated by reference into this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. You should read this entire prospectus and any supplements to this prospectus carefully, including the section entitled Risk Factors and the documents that we incorporate by reference into this prospectus or any such supplements, before making an investment decision.

Unless the context requires otherwise, in this prospectus, a reference to Hologic, we, us, and our refer to Hologic, Inc., a Delaware corporation, and its subsidiaries.

About Hologic

We are a leading developer, manufacturer and supplier of diagnostic and medical imaging systems primarily serving the healthcare needs of women. We focus our resources on developing systems and subsystems offering superior image quality and diagnostic accuracy, which has enabled us to capture significant market share and customer loyalty, despite the presence of large competitors. Our core women's healthcare business units are focused on mammography and bone densitometry. Our Lorad line of mammography systems and our bone densitometry product line are premier brands in their markets. In addition, we develop, manufacture and supply mini C-arm imaging products and DirectRay digital detectors. Our digital detectors are sold primarily to original equipment manufacturers, to incorporate into their own equipment. We also sell, distribute and service complementary products that have been developed and manufactured by other original equipment manufacturers. Our customers include hospitals, imaging clinics and private practices, many of the leading healthcare organizations in the world, and major pharmaceutical companies that utilize our products in conducting clinical trials.

In calendar 2006, we have made a number of strategic acquisitions to expand and enhance our product and service offerings. In May 2006, we acquired AEG Elektrofotografie GmbH, a German company which is a leading manufacturer of photoconductor materials. AEG Elektrofotografie was our sole supplier of amorphous selenium photoconductor coatings employed in our Selenia full-field digital mammography detectors. AEG Elektrofotografie also develops, manufactures, and sells photoconductor materials for use in a variety of electro-photographic applications, including copying and printing. With our acquisition of AEG Elektrofotografie, we take direct control over a critical step in our detector manufacturing process.

In July 2006, we acquired R2 Technology, a leader in the development and commercialization of computer-aided detection, CAD, an innovative technology that assists radiologists in the early detection of breast cancer. R2 Technology pioneered the use of CAD for mammography in 1998 when the ImageChecker system became the first system approved by the FDA for screening mammography. The ImageChecker CAD system was also the first system approved for use with digital mammography. Prior to the acquisition we had integrated R2 Technology's CAD system for use with our digital mammography system, and we were one of R2 Technology's largest customers.

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In July 2006, we acquired Suros Surgical Systems, Inc., a leading innovator in the field of devices used for minimally invasive biopsy and tissue excision. Suros Surgical's patented surgical platform technology allows the removal of tissue or biopsy samples in an effective and efficient manner. Prior to the acquisition, we were one of Suros Surgical's distributors.

We were incorporated in Massachusetts in October 1985 and reincorporated in Delaware in March 1990. Our principal executive offices are located at 35 Crosby Drive, Bedford, Massachusetts 01730 and our telephone number is (781) 999-7300.

The Offering

The 2,328,824 shares of common stock that may be offered under this prospectus and any supplements by the selling stockholders were issued to the stockholders in a private placement in connection with our acquisition of Suros Surgical Systems pursuant to a merger agreement dated as of April 17, 2006. The total purchase price for the acquisition of Suros, exclusive of certain transaction costs and expenses, was paid for by a combination of approximately \$135.2 of cash, contingent deferred payments and the 2,328,824 shares of our common stock covered by this prospectus. We prepared this prospectus to satisfy the registration rights we granted in connection with the acquisition of Suros. We are not selling any securities under this prospectus or its supplements and will not receive any of the proceeds from the sale of shares by the selling stockholders.

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RECENT DEVELOPMENTS

On July 25, 2006, we announced our financial results for the third quarter of fiscal 2006 and the nine months ended June 24, 2006. Our third quarter fiscal 2006 revenues totaled \$119,685,000, a 62% increase when compared to revenues of \$74,053,000 in the third quarter of fiscal 2005. For the third quarter of fiscal 2006, we had net income of \$12,017,000, or \$0.25 per diluted share, compared with net income of \$8,158,000, or \$0.18 per diluted share, in the third quarter of fiscal 2005. Included in the fiscal 2006 third quarter results are the combined operations of AEG Elektrofotografie GmbH and related companies, acquired on May 2, 2006, from the date of acquisition. Our revenues in the nine months ended June 24, 2006, increased 47%, to \$308,625,000 compared to revenues of \$209,466,000 in the nine months ended June 25, 2005. For the nine months ended June 24, 2006, we had net income of \$28,897,000, or \$0.61 per diluted share, compared with net income of \$18,780,000, or \$0.42 per diluted share, for the comparable nine-month period in fiscal 2005. The improvement in revenues and earnings primarily reflects the significant increase in product sales of Selenia digital mammography systems. Earnings per share information for 2005 has been restated to reflect our 2-for-1 stock split effected on November 30, 2005.

RISK FACTORS

Investing in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risks and uncertainties described below, together with all of the other information contained in or incorporated by reference in this prospectus. In particular, you should carefully consider the risks described in the sections entitled "Risk Factors" contained in our latest Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which have been filed with the SEC and are incorporated herein by reference, as well as other information in this prospectus and any accompanying prospectus supplement before purchasing any of our securities. Our actual results could differ materially from those discussed herein. Factors that could cause or contribute to such differences include those discussed below, as well as those discussed elsewhere in this prospectus.

Risks relating to acquisitions

Our business may be harmed by our recently completed acquisitions.

We have acquired related businesses, technologies, product lines, and products from Suros Surgical Systems, Inc., R2 Technology, Inc. and AEG Elektrofotografie GmbH. The success of these acquisitions will depend on our ability to realize the anticipated benefits from combining the acquired businesses with our own. We may fail to realize these anticipated benefits for a number of reasons, including the following:

problems may arise with our ability to successfully integrate the acquired businesses, which may result in the combined companies not operating as effectively and efficiently as expected, which problems may include:

diversion of management time, as well as a shift of focus from operating the businesses to issues related to integration and administration;

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failure to retain and motivate key employees;

failure to successfully manage relationships with customers, distributors and suppliers;

failure of customers to accept new products;

failure to effectively coordinate sales and marketing efforts;

failure to combine product offerings and product lines quickly and effectively;

failure to effectively enhance acquired technology and products or develop new products relating to the acquired businesses;

potential difficulties and inefficiencies in managing and operating businesses in multiple locations or operating businesses in which we have either limited or no direct experience;

potential difficulties integrating financial reporting systems; and

potential difficulties in implementing controls, procedures and policies appropriate for a larger public company at companies that prior to our acquisition had lacked such controls, procedures and policies;

we may not be able to achieve the expected synergies from an acquisition or it may take longer than expected to achieve those synergies;

an acquisition may involve unexpected costs or liabilities, or the effects of purchase accounting may be different from our expectations; and

the acquired businesses may be adversely affected by future legislative, regulatory, or tax changes as well as other economic, business and/or competitive factors.

Our acquisition of AEG Elektrofotografie, which conducts its business worldwide, with headquarters in Germany and manufacturing operations in Germany, China and the United States, is subject to the additional challenges and risks associated with international operations, including those related to integration of operations across different cultures and languages, currency risk and the particular economic, legal, political and regulatory risks associated with specific countries.

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The market price of our common stock may decline as a result of our recent acquisitions.

The market price of our common stock may decline as a result of our recent acquisitions for a number of reasons, including the following:

we have expended significant funds, incurred significant debt and issued a substantial number of additional shares of our common stock in connection with these acquisitions, which may negatively affect our results of operations and be dilutive to our stockholders;

the perceived benefits we anticipate of the acquisitions may not be consistent with those perceived by financial or industry analysts or by investors;

the combined companies may not achieve the expected benefits of the acquisitions as rapidly or to the extent anticipated by financial or industry analysts or by investors;

the effect of the acquisitions on our financial results may not be consistent with the expectations of financial or industry analysts or of investors; and

our significant stockholders, or stockholders of the acquired entities may decide to dispose of their shares of our common stock.

Our business may be harmed by acquisitions we complete in the future.

Our identification of suitable acquisition candidates involves risks inherent in assessing the values, strengths, weaknesses, risks and profitability of acquisition candidates, including the effects of the possible acquisition on our business, diversion of our management's attention and risks associated with unanticipated problems or latent liabilities. If we are successful in pursuing future acquisitions, we will be required to expend significant funds, incur additional debt or issue additional securities, which may negatively affect our results of operations and be dilutive to our stockholders. If we spend significant funds or incur additional debt, our ability to obtain financing for working capital or other purposes could decline, and we may be more vulnerable to economic downturns and competitive pressures. We cannot guarantee that we will be able to finance additional acquisitions or that we will realize any anticipated benefits from acquisitions that we complete. Should we acquire another business, the process of integrating acquired operations into our existing operations may result in unforeseen operating difficulties and may require significant financial resources that would otherwise be available for the ongoing development or expansion of our existing business.

We may incur significant additional and unforeseen expenses and costs to defend or pursue litigation, investigations or other inquiries in connection with acquisitions that we complete.

We may become subject to litigation, investigations or inquiries in connection with acquisitions that we complete, which may cause us to incur significant additional and unforeseen costs to defend or pursue litigation or investigations or other inquiries relating to the acquisition. In connection with our acquisition in September 2005 of the mammography intellectual property assets from Fischer Imaging Corporation, including the rights to their SenoScan digital mammography and MammoTest stereotactic breast biopsy systems, we became subject to a non-

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public Federal Trade Commission investigation to determine if the acquisition of certain of those assets may be anticompetitive and in violation of Section 7 of the Clayton Act or Section 5 of the FTC Act. In July 2006, we entered into a consent agreement with the FTC to resolve our dispute with the FTC regarding our acquisition of the MammoTest stereotactic breast biopsy system intellectual property acquired as part of the mammography intellectual property assets purchased from Fischer Imaging. As part of the consent agreement, we agreed to sell and license back, on a royalty-free nonexclusive basis, all of the intellectual property relating to the Mammotest system to Siemens AG. The consent agreement and agreement with Siemens remains subject to final approval by the FTC. We cannot assure that the consent agreement or the Siemens agreement will receive final FTC approval, which would require us to devote additional resources to resolve this dispute.

Risks relating to our business

The markets for our direct-to-digital full-field mammography products are in the early stage of development.

The markets for digital mammography products are relatively new. There is a significant installed base of conventional screen-film mammography products in hospitals and radiological practices. The use of our direct-to-digital mammography products in many cases would require these potential customers to either modify or replace their existing x-ray imaging equipment. Moreover, as direct-to-digital mammography products are generally more expensive than conventional screen-film mammography products, we believe that a major factor in the market's acceptance of direct-to-digital mammography products has been and will continue to be based upon the benefits direct-to-digital technology as compared to less expensive technologies. As a result, the market for our direct-to-digital mammography products has and will continue to be affected by published studies and reports relating to the comparative efficacy of digital mammography products, and the publication of an adverse study could significantly impair the adoption of this technology and harm our business. The implementation of digital mammography technology is also affected by the trend toward transition by the healthcare industry from conventional film archiving systems to hospital Picture Archiving and Communications Systems, known as PACS, to store x-ray images electronically. Because the benefits of our direct-to-digital mammography technology may not be fully realized by customers until they install a PACS platform, a large potential market for these products may not develop until PACS environments are more widely used. Because of the early stage of the markets for these products, it is likely that our evaluation of the potential markets for these products will materially vary with time. We cannot assure that the markets for our direct-to-digital full-field mammography products will continue to develop.

If we fail to achieve and maintain the high manufacturing standards that our direct radiography products require, we will not be successful in developing and marketing those products.

The manufacture of our direct radiography detectors is highly complex and requires precise high quality manufacturing that is difficult to achieve. We have in the past and may in the future experience difficulties in manufacturing these detectors in commercial quantities, primarily related to delays and difficulties in obtaining critical components for these detectors that meet our high manufacturing standards. Our initial difficulties have led to increased delivery lead-

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times and increased costs of manufacturing these products. Our failure, including the failure of our contract manufacturers, to achieve and maintain the required high manufacturing standards could result in further delays or failures in product testing or delivery, cost overruns, product recalls or withdrawals, or other problems that could harm our business and prospects.

The uncertainty of healthcare reform could harm our business and prospects.

In recent years, the healthcare industry has undergone significant change driven by various efforts to reduce costs, including efforts at national healthcare reform, trends toward managed care, cuts in Medicare, consolidation of healthcare distribution companies and collective purchasing arrangements by office-based healthcare practitioners. Healthcare reform proposals and medical cost containment measures in the United States and in many foreign countries could:

limit the use of our products;

reduce reimbursement available for such use; or

adversely affect the use of new therapies for which our products may be targeted.

These reforms or cost containment measures, including the uncertainty in the medical community regarding their nature and effect, could harm our business and prospects and make it difficult for us to raise additional capital on advantageous terms, if at all.

We depend on third party reimbursement to our customers for market acceptance of our products. Failure of third party payors to provide appropriate levels of reimbursement for use of our products could harm our business and prospects.

Sales of medical products largely depend on the reimbursement of patients' medical expenses by government healthcare programs and private health insurers. The costs of our products are substantial, and market acceptance of our products depends upon our customers' ability to obtain appropriate levels of reimbursement from third-party payors for use of our products. In the United States, the Centers for Medicare & Medicaid Services, known as CMS, establishes guidelines for the reimbursement of healthcare providers treating Medicare and Medicaid patients. Under current CMS guidelines, varying reimbursement levels have been established for mammography, breast biopsy, CAD and bone density assessment and other imaging and diagnostic procedures performed by our products. The actual reimbursement amounts are determined by individual state Medicare carriers and, for non-Medicare and Medicaid patients, private insurance carriers. There are often delays between the reimbursement approvals by CMS and by a state Medicare carrier and private insurance carriers. Moreover, states as well as private insurance carriers may choose not to follow the CMS reimbursement guidelines. The use of our products outside the United States is similarly affected by reimbursement policies adopted by foreign regulatory and insurance carriers. Recently, the CMS has proposed reductions to the reimbursement levels for bone density assessments, CAD and breast biopsy. These proposed reductions, if implemented, or any other reduction or other adverse change in reimbursement policies for the use of our products could harm our business and prospects.

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Our success depends on new product development.

We have a continuing research and development program designed to develop new products and to enhance and improve our products. We are expending significant resources on the development of digital x-ray imaging products, including the development of a digital mammography product to perform breast tomosynthesis, a 3-dimensional imaging technique. The successful development of these products and product enhancements are subject to numerous risks, both known and unknown, including:

unanticipated delays;

access to capital;

budget overruns;

technical problems; and

other difficulties that could result in the abandonment or substantial change in the design, development and commercialization of these new products, including, for example, changes requested by the FDA in connection with pre-market approval applications for our products or 510(k) notification.

Given the uncertainties inherent with product development and introduction, we cannot assure that any of our product development efforts will be successful on a timely basis or within budget, if at all. Our failure to develop new products and product enhancements on a timely basis or within budget could harm our business and prospects.

Our business could be harmed if our products contain undetected errors or defects or do not meet customer specifications.

We are continuously developing new products and improving our existing products. Newly introduced products can contain undetected errors or defects. In addition, these products may not meet their performance specifications under all conditions or for all applications. If, despite our internal testing and testing by our customers, any of our products contain errors or defects or any of our products fail to meet customer specifications, then we may be required to enhance or improve those products or technologies. We may not be able to do so on a timely basis, if at all, and may only be able to do so at considerable expense. In addition, any significant reliability problems could result in adverse customer reaction, negative publicity or legal claims and could harm our business and prospects.

Any new products or product enhancements developed by us may not be commercially successful.

Even if we are successful in developing a new product or a product enhancement, we cannot assure that such product or product enhancement will be commercially successful. The successful commercialization of new products and product enhancements are subject to numerous risks, both known and unknown, including:

uncertainty of the development of a market for such product or enhancement;

product performance, perceived or actual;

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competition; and

other technological developments, as well as the other risks relating to our business as set forth herein. Often, the development of a significant market for a new product or product enhancement will depend upon the establishment of a reimbursement code or an advantageous reimbursement level for use of the product. Moreover, even if addressed, such reimbursement codes or levels frequently are not addressed until after a new product or product enhancement is developed and commercially introduced, which can delay the successful commercialization of a new product or product enhancement.

Our reliance on one or only a limited number of suppliers for some key components or subassemblies for our products could harm our business and prospects.

We rely on one or only a limited number of suppliers for some key components or subassemblies for our products. In particular, we have a limited number of suppliers for the panel for our direct radiography products. In addition, we have only limited sources of supply for some key components used in our mini C-arm systems. Obtaining alternative sources of supply of these components could involve significant delays and other costs, and may not be available to us on reasonable terms, if at all. The failure of a component supplier or contract assembler to provide acceptable quality and timely components or assembly service at an acceptable price, or an interruption of supplies from such a supplier could harm our business and prospects. Any disruption of supplies of key components could delay or reduce shipments, which could result in lost or deferred sales.

Our liquidity and financial position could be harmed by our obligations under our credit facility and our long-term leases for our headquarters and Lorad facilities.

Our obligations under our credit facility and our long-term leases for our headquarters and Lorad facilities could adversely affect our ability to obtain additional financing for acquisitions, working capital or other purposes and could make us more vulnerable to economic downturns and competitive pressures. These obligations could also adversely affect our liquidity and, in the event of a cash shortfall, we could be forced to reduce other expenditures to be able to meet such requirements. Moreover, our credit facility and long-term leases contain financial and other covenants. If we do not comply with our covenants our obligations could be accelerated and our liquidity and financial position could be harmed. Our ability to meet our obligations under our credit facility and leases will be dependent upon our future performance, which will be subject to financial, business and other factors affecting our operations. If we are unable to generate sufficient cash flow from operations in the future to service our debt and make our lease payments, we may be required to refinance all or a portion of such obligations, or obtain additional financing and our liquidity and financial position could be harmed.

Our ability to grow our business could be adversely affected if we are unable to obtain additional financing on acceptable terms.

We are currently seeking to increase the amount of our credit facility and extend its term to provide us with additional financial flexibility to fund our anticipated growth resulting from our recent acquisitions and for working capital. We may also seek additional debt or equity financing. Such financing may not be available on acceptable terms and our failure to obtain

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additional financing when needed could negatively impact our growth, financial condition and results of operations. Additional equity financing may be dilutive to the holders of our common stock, and debt financing, if available, may involve significant cash payment obligations and covenants that restrict our ability to operate our business.

We may not be able to compete successfully.

A number of companies have developed, or are expected to develop, products that compete or will compete with our products. Many of these competitors offer a range of products in areas other than those in which we compete, which may make such competitors more attractive to hospitals, radiology clients, general purchasing organizations and other potential customers. In addition, many of our current and potential competitors are larger and have greater financial resources than us and offer a range of products broader than our products. Some of the companies with which we now compete or may compete in the future have or may have more extensive research, marketing and manufacturing capabilities and significantly greater technical and personnel resources than us, and may be better positioned to continue to improve their technology in order to compete in an evolving industry. Our failure to compete successfully could harm our business and prospects.

Our mammography systems compete with a range of conventional, computed radiography and digital mammography products offered by GE, Siemens, Kodak, Fuji, PlanMed, Giotto, Toshiba, Agfa, Spectra and SwissRay. Our minimally invasive breast biopsy systems compete with products offered by GE, Siemens, Philips, PlanMed, Giotto and with conventional surgical biopsy procedures. Our mini C-arm products compete directly with mini C-arms manufactured and sold by a limited number of companies including GE. We also compete indirectly with manufacturers of conventional C-arm image intensifiers including Philips, Siemens and GE. The primary competitor for our osteoporosis assessment products is General Electric Medical Systems.

The primary competitor for our recently acquired Suros biopsy and tissue extraction product line is Ethicon, a Johnson & Johnson company. Other competitors in this market include SenoRx, Rubicor, Sanarus Medical and Bard. The primary competitor for our recently acquired CAD product line is iCAD, Inc..

Our success depends upon our ability to adapt to rapid changes in technology and customer requirements.

The market for our products has been characterized by rapid technological change, frequent product introductions and evolving customer requirements. We believe that these trends will continue into the foreseeable future. Our success will depend, in part, upon our ability to enhance our existing products, successfully develop new products that meet increasing customer requirements and gain market acceptance. If we fail to do so our products may be rendered obsolete or uncompetitive by new industry standards or changing technology.

Our failure to manage current or future alliances or joint ventures effectively may harm our business and prospects.

We have entered into strategic alliances with Siemens and Esaote. We are also exploring other potential alliances, joint ventures or other business relationships. Siemens and Esaote compete

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with us in some of our business segments, and are competitors or potential competitors to some of our customers or potential customers. Our alliance with Siemens, Esaote or any other person could enhance their business to our detriment or make it more difficult for us to enter into advantageous business transactions or relationships with others. Moreover, we may not be able to:

identify appropriate candidates for alliances or joint ventures;

assure that any alliance or joint venture candidate will provide us with the support anticipated;

successfully negotiate an alliance or joint venture on terms that are advantageous to us; or

successfully manage any alliance or joint venture.

Furthermore, any alliance or joint venture may divert management time and resources. Entering into a disadvantageous alliance or joint venture or failing to manage an alliance or joint venture effectively could harm our business and prospects.

The future growth of our bone densitometry business depends in large part on the continued development and more widespread acceptance of complementary therapies as well as our ability to expand into the primary care market.

Our bone densitometers and related products are used to assist physicians in diagnosing patients at risk for osteoporosis and other bone disorders, and to monitor the effectiveness of therapies to treat these disorders. As a result, the future growth of the market for these products and of this business will in large part be dependent upon the development and more widespread acceptance of drug therapies to prevent and to treat osteoporosis, and in addition, our ability to expand into the primary care market. Over the last several years, the Food and Drug Administration, the FDA, has approved a number of drug therapies to treat osteoporosis. We also understand that a number of other drug therapies are under development. While sales of our bone densitometry products have benefited from the increased availability and use of these therapies, most patients who are at risk for osteoporosis continue to go untreated. We cannot assure that any therapies under development or in clinical trials will prove to be effective, obtain regulatory approval, or that any approved therapy will gain widespread acceptance, or that we will be able to expand into the primary care market. Even if these therapies gain widespread acceptance, we cannot assure that this acceptance will increase the sales of our products.

Reductions in revenues could harm our operating results because a high percentage of our operating expenses is relatively fixed.

A high percentage of our operating expenses is relatively fixed. We likely will not be able to reduce spending to compensate for adverse fluctuations in revenues. As a result, shortfalls in revenues are likely to harm our operating results.

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Our results of operations are subject to significant quarterly variation and seasonal fluctuation.

Our results of operations have been and may continue to be subject to significant quarterly variation. The results for a particular quarter may vary due to a number of factors, including:

the overall state of healthcare and cost containment efforts

reimbursement levels for the use of our products;

the development status and demand for our products;

the development status and demand for therapies to treat breast cancer and osteoporosis;

economic conditions in our markets;

foreign exchange rates;

the timing of orders;

the timing of expenditures in anticipation of future sales;

the mix of products we sell;

the introduction of new products and product enhancements by us or our competitors; and

pricing and other competitive conditions.

Customers may also cancel or reschedule shipments. Production difficulties could also delay shipments. Any of these factors also could harm our business and prospects.

Our delay or inability to obtain any necessary United States or foreign regulatory clearances or approvals for our products could harm our business and prospects.

Our products are medical devices that are the subject of a high level of regulatory oversight. Our delay or inability to obtain any necessary United States or foreign regulatory clearances or approvals for our products could harm our business and prospects. The process of obtaining clearances and approvals can be costly and time-consuming. There is a risk that any approvals or clearances, once obtained, may be withdrawn or modified. Medical devices cannot be marketed in the United States without clearance or approval by the FDA. Medical devices sold in the United States must also be manufactured in compliance with FDA Good Manufacturing Practices, which regulate the design, manufacture, packing, storage and installation of medical devices. Moreover, medical devices are required to comply with FDA regulations relating to investigational research and labeling. States may also regulate the manufacture, sale and use of medical devices, particularly those that employ x-ray technology. Our products are also subject to approval and regulation by foreign regulatory and safety agencies.

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Fluctuations in the exchange rates of European currencies and the other foreign currencies in which we conduct our business, in relation to the U.S. dollar, have harmed and could continue to harm our business and prospects.

Foreign sales accounted for approximately 33% of our product sales in fiscal 2005, 39% of our product sales in fiscal 2004 and 32% of our product sales in fiscal 2003. We maintain a sales and service office in Belgium and a support office in France, and our AEG Elektrofotografie subsidiary conducts its business worldwide, with headquarters in Germany and manufacturing operations in Germany and China. The expenses of these offices are denominated in local currencies, and our foreign sales may be denominated in local currencies, the Euro or U.S. dollars. We anticipate that foreign sales and sales denominated in foreign currencies will continue to account for a significant portion of our total sales. Fluctuations in the value of local currencies have caused, and are likely to continue to cause, amounts translated into U.S. dollars to fluctuate in comparison with previous periods. We have hedged our foreign currency exposure by borrowing funds in local European currencies to pay the expenses of our foreign offices. In addition, our recently acquired AEG operations has engaged in hedging activities, such as currency swaps, to hedge its foreign currency exposure. There is a risk that any hedging activities will not be successful in mitigating our foreign exchange risk exposure.

We conduct our business worldwide, which exposes us to a number of difficulties in coordinating our international activities and dealing with multiple regulatory environments.

We sell our products to customers throughout the world. Our worldwide business may be harmed by:

difficulties in staffing and managing operations in multiple locations;

greater difficulties in trade accounts receivable collection;

possible adverse tax consequences;

governmental currency controls;

changes in various regulatory requirements;

political and economic changes and disruptions;

export/import controls; and

tariff regulations.

Additionally, as a result of our acquisition of AEG Elektrofotografie, which also conducts its business worldwide, with headquarters in Germany and manufacturing operations in Germany, China and the United States, we may experience increased difficulties in coordinating international activities and successfully integrating and operating AEG Elektrofotografie's business.

Our business could be harmed if we are unable to protect our proprietary technology.

We rely primarily on a combination of trade secrets, patents, copyright and trademark laws and confidentiality procedures to protect our technology. Despite these precautions, unauthorized third parties may infringe, copy or reverse engineer portions of our technology. We do not know if current or future patent applications will be issued with the scope of the claims sought, if at all,

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or whether any patents issued will be challenged or invalidated. In addition, we have obtained or applied for corresponding patents and patent applications in several foreign countries for some of our patents and patent applications. There is a risk that these patent applications will not be granted or that the patent or patent application will not provide significant protection for our products and technology. Our competitors may independently develop similar technology that our patents do not cover. In addition, because patent applications in the United States are not publicly disclosed until the patent is issued, applications may have been filed which relate to our technology. Moreover, there is a risk that foreign intellectual property laws will not protect our intellectual property rights to the same extent as United States intellectual property laws. In the absence of significant patent protection, we may be vulnerable to competitors who attempt to copy our products, processes or technology.

Our business could be harmed if we infringe upon the intellectual property rights of others.

There has been substantial litigation regarding patent and other intellectual property rights in the medical device and related industries. We are and have been engaged, and may be in the future, notified that we may be infringing intellectual property rights possessed by third parties. In connection with such litigation or if any claims are asserted against our intellectual property rights, we may seek to enter into royalty or licensing arrangements. There is a risk in these situations that no license will be available or that a license will not be available on reasonable terms. Alternatively, we may decide to litigate such claims or to design around the patented technology. These actions could be costly and would divert the efforts and attention of our management and technical personnel. As a result, any infringement claims by third parties or claims for indemnification by customers resulting from infringement claims, whether or not proven to be true, may harm our business and prospects.

Our future success will depend on the continued services of our key personnel.

The loss of any of our key personnel, particularly our key research and development personnel, could harm our business and prospects. Our success will also depend upon our ability to attract and retain other qualified managerial and technical personnel. Competition for such personnel, particularly software engineers and other technical personnel, is intense. We may not be able to attract and retain personnel necessary for the development of our business. We do not have any key man life insurance for any of our officers or other key personnel.

We are exposed to potential risks and we will continue to incur increased costs as a result of the internal control testing and evaluation process mandated by Section 404 of the Sarbanes-Oxley Act of 2002.

We assessed the effectiveness of our internal control over financial reporting as of September 24, 2005 and assessed all deficiencies on both an individual basis and in combination to determine if, when aggregated, they constitute more than an inconsequential deficiency. As a result of this evaluation, no significant deficiencies or material weaknesses were identified. Although we have completed the documentation and testing of the effectiveness of our internal control over financial reporting for fiscal 2005, as required by Section 404 of the Sarbanes-Oxley Act of 2002, we expect to continue to incur costs, including increased accounting fees and increased staffing levels, in order to maintain compliance with that section of the Sarbanes-Oxley Act. We continue to monitor controls for any additional weaknesses or deficiencies. No evaluation can

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provide complete assurance that our internal controls will detect or uncover all failures of persons within the company to disclose material information otherwise required to be reported. The effectiveness of our controls and procedures could also be limited by simple errors or faulty judgments. In addition, if we continue to expand globally, the challenges involved in implementing appropriate internal controls will increase and will require that we continue to improve our internal controls.

In the future, if we fail to complete the Sarbanes-Oxley 404 evaluation in a timely manner, or if our independent registered public accounting firm cannot attest in a timely manner to our evaluation, we could be subject to regulatory scrutiny and a loss of public confidence in our internal controls. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations.

We expect that current and future acquisitions of companies, some of which have operations outside the United States, will provide us with additional challenges in implementing the required processes, procedures and controls in our acquired operations. Our recently acquired companies do not have disclosure controls and procedures or internal control over financial reporting that are as thorough or effective as those required by securities law applicable to public companies in the United States. Although we intend to devote substantial time and incur substantial costs, as necessary, to ensure ongoing compliance, we cannot be certain that we will be successful in complying with Section 404.

There is a risk that our insurance will not be sufficient to protect us from product liability or other claims, or that in the future liability insurance will not be available to us at a reasonable cost, if at all.

Our business involves the risk of product liability and other claims inherent to the medical device business. We maintain product liability insurance subject to deductibles and exclusions. There is a risk that our insurance will not be sufficient to protect the company from product and other liability claims, or that product liability insurance will not be available to us at a reasonable cost, if at all. An under-insured or uninsured claim could harm our operating results or financial condition.

We use hazardous materials and products.

Our research and development involves the controlled use of hazardous materials, such as toxic and carcinogenic chemicals and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by federal, state and local regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of this type of accident, we could be held liable for any resulting damages, and any such liability could be extensive. We are also subject to substantial regulation relating to occupational health and safety, environmental protection, hazardous substance control, and waste management and disposal. The failure to comply with such regulations could subject us to, among other things, fines and criminal liability.

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Risks relating to our common stock

Provisions in our certificate of incorporation and bylaws and our stockholder rights plan may have the effect of discouraging advantageous offers for our business or common stock and limit the price that investors might be willing to pay in the future for shares of our common stock.

Our certificate of incorporation, bylaws and the provisions of Delaware corporate law include provisions that may have the effect of discouraging or preventing a change in control. In addition, we have a stockholder rights plan that may have the effect of discouraging or preventing a change in control. These provisions could limit the price that our stockholders might receive in the future for shares of our common stock.

Our stock price is volatile.

The market price of our common stock has been, and may continue to be, highly volatile. We believe that a variety of factors could cause the price of our common stock to fluctuate, perhaps substantially, including:

announcements and rumors of developments related to our business, including changes in reimbursement rates, proposed and completed acquisitions, or the industry in which we compete;

quarterly fluctuations in our actual or anticipated operating results and order levels;

general conditions in the worldwide economy;

announcements of technological innovations;

new products or product enhancements by us or our competitors;

developments in patents or other intellectual property rights and litigation; and

developments in relationships with our customers and suppliers.

In addition, in recent years the stock market in general and the markets for shares of high-tech companies, have experienced extreme price fluctuations which have often been unrelated to the operating performance of affected companies. Any such fluctuations in the future could adversely affect the market price of our common stock, and the market price of our common stock may decline.

Future sales of our common stock may cause our stock price to decline.

Substantially all of our outstanding shares of common stock are freely tradable without restriction or registration. Affiliates must sell all shares they own in compliance with the volume and other requirements of Rule 144, except for the holding period requirements. Sales of substantial amounts of common stock by our stockholders, pursuant to this prospectus or otherwise, or even the potential for such sales, may cause the market price of our common stock to decline and could impair our ability to raise capital through the sale of our equity securities.

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USE OF PROCEEDS

We will not receive any of the proceeds from the sale of our common stock by the selling stockholders. All proceeds from the sale of shares by selling stockholders will be for the accounts of such selling stockholders.

SELLING STOCKHOLDERS

This prospectus relates to the possible resale by the selling stockholders of shares of common stock that we issued to them in connection with our acquisition of Suros Surgical Systems pursuant to a merger agreement dated as of April 17, 2006. The total purchase price for this acquisition, exclusive of certain transaction costs and expenses, was paid for by a combination of approximately \$135.2 of cash, contingent deferred payments and the 2,328,824 shares of our common stock covered by this prospectus. We prepared this prospectus to satisfy the registration rights we granted in connection with that acquisition.

The selling stockholders may from time to time offer and sell pursuant to this prospectus any or all of the shares that such selling stockholders acquired under the merger agreement.

The following table presents information regarding the selling stockholders and the shares that each such selling stockholder may offer and sell from time to time under this prospectus. This table is prepared based on information supplied to us by the selling stockholders and reflects holdings as of July 27, 2006 and assumes the issuance of the shares referenced above. As used in this prospectus, the term "selling stockholder" includes those selling stockholders identified below and any permitted transferees who receive after the date of this prospectus the shares covered by this prospectus from a selling stockholder in a non-sale related transfer. The number of shares in the column "Maximum Number of Shares Being Offered" represents all of the shares that a selling stockholder may offer under this prospectus. The column "Number of Shares Beneficially Owned After Offering" assumes that the selling stockholders sell all of the shares offered under this prospectus. However, because the selling stockholders may offer from time to time all, some or none of their shares under this prospectus, or in another permitted manner, we cannot assure the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after completion of the sales. In addition, we do not know how long the selling stockholders will hold their shares before selling them.

Prior to our acquisition of Suros, each of the following selling stockholders served as directors or officers of Suros in the capacities set forth opposite his name:

| Name | Position |
|-------------------|--|
| James Baumgardt | Chairman of the Board of Directors |
| Jim Pearson | President and Chief Executive Officer and Director |
| Joseph L. Mark | Vice President, Technology and Director |
| Michael E. Miller | Vice President, Engineering |
| Jeff Hanthorn | Vice President, Administration |

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| | |
|-----------------------|--|
| Richard M. Rella | Vice President and Chief Financial Officer |
| Jim Smith | Vice President and Chief Operating Officer |
| Kent Smith | Vice President, Sales |
| Keith Brauer | Director |
| William R. Ringo, Jr. | Director |
| Eugene Henderson | Director |
| Lloyd Benson | Director |
| Fazle Husain | Director |
| Carter McNabb | Director |

Following our acquisition of Suros, the officers named above will continue to serve in those capacities for Suros. Mr. Pearson has also been appointed a Vice President of Hologic. A number of the selling stockholders were employees of Suros prior to our acquisition and are continuing as employees of Suros after our acquisition. Other than as described above, no selling stockholder has had, within the past three years, any position, office, or material relationship with us or any of our predecessors or affiliates.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Securities Exchange Act of 1934, as amended. The percentage of shares beneficially owned prior to the offering is based on 49,902,193 shares of our common stock actually issued and outstanding as of July 26, 2006.

| Name of Beneficial Owner | Number of Shares Beneficially Owned as of July 26, 2006 | Maximum Number of Shares Being Offered | Number of Shares Beneficially Owned after Offering | Percentage of Shares Owned after Offering |
|---|--|---|---|--|
| David J. Allen | -0- | 1,898 | -0- | * |
| F. Dean Apple | -0- | 15,517 | -0- | * |
| MLPF & S FBO James R. Baumgardt | -0- | 7,592 | -0- | * |
| James R. Baumgardt | -0- | 48,404 | -0- | * |
| Franklin Keith Bean | -0- | 5,263 | -0- | * |
| First Clearing Corp. Custodian FBO Jeffrey A. Boester IRA | -0- | 2,277 | -0- | * |
| Raymond James Custodian, Inc., FBO Jeffrey A. Boester, M.D. | -0- | 3,796 | -0- | * |
| Keith Brauer | -0- | 3,036 | -0- | * |
| Dianna A. Broecker | -0- | 47,886 | -0- | * |
| BancOne & Co Trustee of Joseph H. and Dianna A. Broecker Charitable Remainder Trust | -0- | 25,053 | -0- | * |
| Donald E. Brown | -0- | 6,382 | -0- | * |
| Thomas J. Buck | -0- | 3,011 | -0- | * |
| MLPF&S FBO Robert E. Clutter, M.D. | -0- | 5,263 | -0- | * |
| Donald F. Coppel, Jr. | -0- | 1,898 | -0- | * |
| James T. Cox | -0- | 3,796 | -0- | * |
| JLT PR LLC Rollin M. Dick | -0- | 12,763 | -0- | * |

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| Name of Beneficial Owner | Number of Shares Beneficially Owned as of July 26, 2006 | Maximum Number of Shares Being Offered | Number of Shares Beneficially Owned after Offering | Percentage of Shares Owned after Offering |
|--|--|---|---|--|
| Edward J. Donahue | -0- | 151 | -0- | * |
| Christopher T. Duey | -0- | 2,530 | -0- | * |
| Michael L. Eagle | -0- | 3,796 | -0- | * |
| F. Howard East | -0- | 11,645 | -0- | * |
| Kay Fagin | -0- | 6,073 | -0- | * |
| Jerry L. Ferguson | -0- | 12,763 | -0- | * |
| Steven Fritsch, M.D. | -0- | 4,529 | -0- | * |
| Robert Gaffney | -0- | 758 | -0- | * |
| Salomon Smith Barney FBO Steven R. Gatewood IRA #480-63482-17-031 | -0- | 9,135 | -0- | * |
| Sara Y. Gelbfish | -0- | 6,984 | -0- | * |
| Miriam A. Gelbfish | -0- | 6,984 | -0- | * |
| Elisheva J. Gelbfish | -0- | 6,984 | -0- | * |
| Gary A. Gelbfish as custodian for Isaac M. Gelbfish under the New York UTMA | -0- | 6,984 | -0- | * |
| Gary A. Gelbfish as custodian for Ezriel M. Gelbfish under the New York UTMA | -0- | 6,984 | -0- | * |
| Timothy A. Goedde, M.D. | -0- | 34,470 | -0- | * |
| Phyllis Greenberger | -0- | 4,861 | -0- | * |
| William D. Gurley Revocable Trust dated 6/29/05 William D. Gurley Trustee | -0- | 6,073 | -0- | * |
| Michael G. Hall | -0- | 77,802 | -0- | * |
| David & Valerie Hall, Joint Tenants | -0- | 5,719 | -0- | * |
| The Hanson Family Partnership, L.P. | -0- | 3,796 | -0- | * |
| Jeffrey Hanthorn | -0- | 25,242 | -0- | * |
| Peter P. Hawryluk | -0- | 5,061 | -0- | * |
| Brian A. Hegarty | -0- | 5,061 | -0- | * |
| Eugene L. Henderson | -0- | 63,350 | -0- | * |
| Richard C. Huber, Jr. | -0- | 5,263 | -0- | * |
| Rose Hulman Institute of Technology | -0- | 140,707 | -0- | * |
| Louis H. Lauch | -0- | 28,748 | -0- | * |
| April Levinsohn | -0- | 1,062 | -0- | * |
| John Levinsohn | -0- | 3,796 | -0- | * |
| Lewis L. Liggett, II | -0- | 3,796 | -0- | * |
| Jericho Limited Partnership | -0- | 319,117 | -0- | * |
| Joseph Mark | -0- | 4,861 | -0- | * |
| Allan L. Mattson | -0- | 4,858 | -0- | * |
| John P. McGoff | -0- | 1,898 | -0- | * |
| Gordon C. McLaughlin, III | -0- | 3,796 | -0- | * |
| Baseline, Inc., Retirement Plan FBO Kurt Meyer | -0- | 4,858 | -0- | * |
| Lawrence A. and Patricia D. Meyer | -0- | 3,796 | -0- | * |

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| Name of Beneficial Owner | Number of Shares Beneficially Owned as of July 26, 2006 | Maximum Number of Shares Being Offered | Number of Shares Beneficially Owned after Offering | Percentage of Shares Owned after Offering |
|---|--|---|---|--|
| Michael E. Miller | -0- | 4,861 | -0- | * |
| Mobius Limited Partnership | -0- | 319,117 | -0- | * |
| Morgan Stanley Venture Investors 2002 Fund, L.P. | -0- | 21,219 | -0- | * |
| Morgan Stanley Dean Witter Venture Investors IV, L.P. | -0- | 9,243 | -0- | * |
| Morgan Stanley Dean Witter Venture Offshore Investors IV, L.P. | -0- | 3,108 | -0- | * |
| Morgan Stanley Venture Partners 2002 Fund, L.P. | -0- | 70,804 | -0- | * |
| Morgan Stanley Dean Witter Venture Partners IV, L.P. | -0- | 79,672 | -0- | * |
| Noblitt Family Partners, L.P. | -0- | 11,489 | -0- | * |
| Jim Pearson | 200 | 107,338 | 200 | * |
| Kimberli J. Pfeifer | -0- | 3,796 | -0- | * |
| Robert & Kathleen Postlethwait | -0- | 4,858 | -0- | * |
| Ronald Reisman | -0- | 6,073 | -0- | * |
| Richard M. Rella | -0- | 30,367 | -0- | * |
| William R. Ringo | -0- | 11,694 | -0- | * |
| MLPF&S Custodian FBO William R. Ringo | -0- | 1,062 | -0- | * |
| River Cities Capital Fund II, L.P. | -0- | 29,907 | -0- | * |
| River Cities SBIC III, L.P. | -0- | 119,631 | -0- | * |
| John T. Roberts Trust | -0- | 15,184 | -0- | * |
| Ronald E. Rosenberg | -0- | 2,404 | -0- | * |
| Larry Sablosky | -0- | 18,529 | -0- | * |
| Jeffrey R. Schwindt | -0- | 3,796 | -0- | * |
| Scott Sharp | -0- | 4,858 | -0- | * |
| Barbara B. Shortle | -0- | 22,776 | -0- | * |
| BancOne & Co Trustee of Robert Shortle Charitable Remainder Trust | -0- | 15,184 | -0- | * |
| Robert H. Shortle | -0- | 34,978 | -0- | * |
| Sightline Partners Healthcare Fund II, L.P. | -0- | 138,036 | -0- | * |
| Nelson M. Sims | -0- | 5,668 | -0- | * |
| James G. Smith | -0- | 18,979 | -0- | * |
| Kent Smith | -0- | 23,534 | -0- | * |
| David J. Stapor | 150 | 3,796 | 150 | * |
| Samuel Sutphin II | -0- | 6,382 | -0- | * |
| L. Gene Tanner | -0- | 30,752 | -0- | * |
| Twilight Venture Partners, LLC | -0- | 79,315 | -0- | * |
| Validus, LLC | -0- | 20,675 | -0- | * |
| Validus, L.P. | -0- | 3,796 | -0- | * |

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| Name of Beneficial Owner | Number of Shares Beneficially Owned as of July 26, 2006 | Maximum Number of Shares Being Offered | Number of Shares Beneficially Owned after Offering | Percentage of Shares Owned after Offering |
|--|--|---|---|--|
| Harrington Wealth Management Custodian for Tom Vandergrift IRA | -0- | 759 | -0- | * |
| John H. Vandergrift, M.D. | -0- | 3,036 | -0- | * |
| Reserved (1) | -0- | 4,022 | -0- | * |

* Less than one percent.

- (1) We are reserving 4,022 shares of common stock for certain potential selling stockholders who currently have not, but may in the future under the registration rights agreement, elect to sell their common stock under the registration statement of which this prospectus is a part. As of the date of this prospectus, numerous potential selling stockholders have not yet provided us with the information necessary to specifically include them by name in the prospectus. It is our intent, however, to file prospectus supplements at such reasonable times as such potential selling stockholders provide the information necessary to include them in the registration statement of which this prospectus is a part and otherwise comply with the provisions of the registration rights agreement.

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PLAN OF DISTRIBUTION

We are registering 2,328,824 shares of our common stock under this prospectus on behalf of the selling stockholders. The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of any sale of the shares covered by this prospectus.

The selling stockholders, including any of their permitted donees, pledgees, transferees or other successors-in-interest, may sell any or all of their shares of our common stock from time to time directly or, alternatively, through underwriters, broker-dealers or agents to one or more purchasers. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at varying prices determined at the time of sale, or at negotiated prices. The sales of shares of common stock by the selling stockholders may be effected in transactions (which may involve crosses or block transactions):

on the Nasdaq Stock Market or any other national securities exchange or quotation service on which the shares may be listed or quoted at the time of sale;

in the over-the-counter market;

otherwise than on such exchanges or services or in the over-the-counter market;

in privately negotiated transactions;

through the writing of put or call options relating to the shares;

through remarketing transactions;

by pledge to secure debts and other obligations;

through offerings of securities exchangeable, convertible or exercisable for the shares;

under forward purchase contracts;

through distributions to members, partners or stockholders;

under delayed delivery contracts or other contractual commitments; or

a combination of the above transactions, the transactions referred to in the following sentences or otherwise.

In connection with sales of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares in the course of hedging in positions they assume. The selling stockholders may also sell shares short and deliver shares to close out short positions, or loan or pledge shares to broker-dealers that in turn may sell such securities. The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933,

as amended, or the Securities Act, if available.

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The selling stockholders may pay broker-dealers or agents compensation in the form of commissions, discounts or concessions in amounts to be negotiated in connection with the sales. In offering the shares covered by this prospectus, these broker-dealers and any other participating broker-dealers may be deemed to be underwriters within the meaning of the Securities Act, in connection with such sales. Any profits realized by the selling stockholders and any commissions, discounts or concessions received by any broker-dealer or agent may be deemed to be underwriting discounts or commissions under the Securities Act. To the extent the selling stockholders may be deemed to be an underwriter, the selling stockholders will be subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution to the public.

In order to comply with the securities laws of some states, if applicable, the shares of common stock must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Underwriters and purchasers that are deemed underwriters under the Securities Act may engage in transactions that stabilize, maintain or otherwise affect the price of the securities, including the entry of stabilizing bids or syndicate covering transactions or the imposition of penalty bids. The selling stockholders and any other persons participating in the sale or distribution of the shares will be subject to the applicable provisions of the Exchange Act and the rules and regulations thereunder including, without limitation, Regulation M. These provisions may restrict certain activities of, and limit the timing of, purchases by the selling stockholders or other persons or entities. Furthermore, under Regulation M, persons engaged in a distribution of securities are prohibited from simultaneously engaging in market making and certain other activities with respect to such securities for a specified period of time prior to the commencement of such distributions, subject to special exceptions or exemptions. Regulation M may restrict the ability of any person engaged in the distribution of the securities to engage in market-making and certain other activities with respect to those securities. In addition, the anti-manipulation rules under the Exchange Act may apply to sales of the securities in the market. All of these limitations may affect the marketability of the shares and the ability of any person to engage in market-making activities with respect to the securities.

We will bear all costs, expenses and fees in connection with the registration of the shares. In addition, to facilitate the sales of the shares in an orderly manner we may agree from time to time to pay the expenses of any broker-dealer or agent that participates in transactions involving sales of the shares. We have agreed from time to time to indemnify the selling stockholders and any broker-dealer or agent that participates in transactions involving the sale of the shares against specified civil liabilities, including liabilities arising under the Securities Act.

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The selling stockholders will bear the costs of commissions and discounts or similar selling expenses, if any, attributable to the sales of the shares. The selling stockholders may agree to indemnify any broker-dealer, agent or other person that participates in transactions involving sales of the shares against specified civil liabilities, including liabilities arising under the Securities Act.

If any selling stockholder notifies us that a material agreement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a prospectus supplement, if required, pursuant to Rule 424 under the Securities Act, setting forth:

the name of each of the participating broker-dealers;

the number of shares involved;

the price at which the shares were sold;

the commissions paid or discounts or concessions allowed to the broker-dealers, where applicable;

a statement to the effect that the broker-dealer did not conduct any investigation to verify the information set out or incorporated by reference to the prospectus; and

any other facts material to the transaction.

In addition, if any selling stockholder notifies us that a permitted donee or pledge intends to sell shares of common stock and that such donee or pledge must be included in the list of selling stockholders, we will file a prospectus supplement including such donee or pledgee in the list of selling stockholders. Under our registration rights agreement, we are not required to amend or supplement our registration statement or the prospectus or prospectus supplement included therein to include any permitted transferee more than one time in any one month period.

Certain of the broker-dealers or agents or other persons engaged by the selling stockholders may also be engaged in transactions with or perform services for us or our subsidiaries in the ordinary course of business.

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LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Brown Rudnick Berlack Israels LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements of Hologic, Inc. appearing in Hologic, Inc.'s Annual Report (Form 10-K) for the year ended September 24, 2005, and Hologic, Inc. management's assessment of the effectiveness of internal control over financial reporting as of September 24, 2005 included therein, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements and management's assessment are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

The financial statements of Suros Surgical Systems, Inc. as of December 31, 2005 and 2004, and for each of the years in the three-year period ended December 31, 2005, have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

The consolidated financial statements of R2 Technology, Inc. as of December 31, 2005 and 2004 and for each of the three years in the period ended December 31, 2005 appearing in Hologic Inc.'s Current Report (Form 8-K) dated June 30, 2006 have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

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WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information filed by us at the SEC's public reference rooms at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's web site at <http://www.sec.gov>. In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 K Street, Washington, D.C. 20006.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act in connection with this prospectus. This prospectus does not contain all of the information set forth in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information you should refer to the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, you should refer to the copy of such contract or document filed as an exhibit to or incorporated by reference in the registration statement. Each statement as to the contents of such contract or document is qualified in all respects by such reference. You may obtain copies of the registration statement from the SEC's principal office in Washington, D.C. upon payment of the fees prescribed by the SEC, or you may examine the registration statement without charge at the offices of the SEC described above.

The SEC allows us to incorporate by reference information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. We incorporate by reference in this prospectus the following documents:

Our annual report on Form 10-K for the fiscal year ended September 24, 2005, filed with the SEC on December 6, 2005, including those portions incorporated by reference therein from our definitive proxy materials on Schedule 14A as filed with the SEC on January 18, 2006;

Our quarterly reports on Form 10-Q for the fiscal quarter ended December 24, 2005, filed with the SEC on February 2, 2006 and for the fiscal quarter ended March 25, 2006, filed with the SEC on May 4, 2006;

Our current reports on Form 8-K, filed with the SEC on December 15, 2005, March 20, 2006, April 17, 2006, April 24, 2006, May 2, 2006, May 12, 2006, May 25, 2006, June 30, 2006, July 14, 2006 and July 27, 2006;

the description of our common stock contained in our registration statement on Form 8-A, filed with the SEC on January 31, 1990; and

the description of our preferred share rights contained in our registration statement on Form 8-A, filed with the SEC on December 4, 2002.

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Current Reports on Form 8-K containing only Regulation FD or Regulation G disclosure furnished under Items 2.02 and 7.01 of Form 8-K are not incorporated herein by reference.

All documents and reports filed by us with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than Current Reports on Form 8-K containing only Regulation FD or Regulation G disclosure furnished under Items 2.02 and 7.01 of Form 8-K, unless otherwise indicated therein) after the date of this prospectus and prior to the termination of the offering made hereby shall be deemed to be incorporated by reference into this prospectus and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein or in any prospectus supplement modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide, without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated herein by reference other than exhibits, unless such exhibits are specifically incorporated by reference into such documents or this document. Requests for such documents should be addressed in writing or by telephone to:

Hologic, Inc.

35 Crosby Drive

Bedford, Massachusetts 01730

Attention: Investor Relations

(781) 999-7300

You should rely only on the information contained in this prospectus, any prospectus supplement or any document to which we have referred you. We have not authorized anyone else to provide you with information that is different. This prospectus and any prospectus supplement may be used only where it is legal to sell these securities. The information in this prospectus or any prospectus supplement is current only as of the date on the front of these documents.

Table of Contents**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.**

The following table sets forth an estimate of the expenses we expect to incur and pay in connection with the issuance and distribution of the securities being registered:

| | |
|--|------------------|
| Registration Fee Securities and Exchange Commission. | \$ 11,057 |
| Accounting Fees and Expenses. | \$ 30,000 |
| Legal Fees and Expenses | \$ 30,000 |
| Miscellaneous. | \$ 10,043 |
| TOTAL. | \$ 81,100 |

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Article 10 of our certificate of incorporation eliminates the personal liability of directors to us or our stockholders for monetary damages for breach of fiduciary duty to the extent permitted by Delaware General Corporation Law. Article VII of our By-Laws provides that we shall indemnify our officers and directors to the extent permitted by Delaware General Corporation Law. Section 145 of the Delaware General Corporation Law authorizes a corporation to indemnify directors, officers, employees or agents of the corporation if such party acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the corporation and, with respect to any criminal action or proceeding, had no reason to believe his conduct was unlawful, as determined in accordance with the Delaware General Corporation Law. Section 145 further provides that indemnification shall be provided if the party in question is successful on the merits otherwise. We have also entered into indemnification agreements with each of our directors. The indemnification agreements are intended to provide the maximum protection permitted by Delaware law with respect to indemnification of directors. We may also enter into similar agreements with certain of our officers who are not also directors. The effect of these provisions is to permit indemnification by us for liabilities arising under the Securities Act of 1933, as amended. We also maintain directors and officers liability insurance.

Table of Contents**ITEM 16. EXHIBITS.****Exhibit**

| Number | Title | Reference |
|---------------|---|------------------|
| 2.01 | Agreement and Plan of Merger by and among Hologic, Swordfish Acquisition, Inc., and Suros Surgical Systems, Inc., dated as of April 17, 2006. | A-2.1* |
| 2.02 | Agreement and Plan of Merger by and among Hologic, Hydrogen Acquisition, Inc. and R2 Technology, Inc., dated as of April 24, 2006. | A-2.2* |
| 3.01 | Certificate of Incorporation of Hologic. | B-3.01* |
| 3.02 | Amendment to Certificate of Incorporation of Hologic. | C-3.03* |
| 3.03 | Certificate of Amendment to Certificate of Incorporation of Hologic. | D-3.03* |
| 3.04 | Amended and Restated Bylaws of Hologic. | E-3.03* |
| 4.01 | Specimen Certificate for shares of Hologic's common stock. | F-1* |
| 4.02 | Description of Capital Stock (contained in Hologic's Certificate of Incorporation, as amended). | B-3.01*, C-3.03* |
| 4.03 | Rights Agreement dated September 17, 2002. | G-4* |
| 4.04 | Form of Rights Certificate. | G-4* |
| 4.05 | Registration Rights Agreement by and among Hologic, and the Stockholder Representative (as defined therein) dated as of July 27, 2006 | H-4.1* |
| 5.01 | Opinion of Brown Rudnick Berlack Israels LLP. | Filed herewith |
| 23.01 | Consent of Brown Rudnick Berlack Israels LLP (contained in Exhibit 5.01). | Filed herewith |
| 23.02 | Consent of Ernst & Young LLP (Independent registered public accountants for Hologic). | Filed herewith |
| 23.03 | Consent of Ernst & Young LLP (independent auditors for R2 Technology, Inc.). | Filed herewith |
| 23.04 | Consent of KPMG LLP (independent registered public accountants for Suros Surgical Systems, Inc.) | Filed herewith |
| 24.01 | Power of Attorney (included on signature page of this registration statement). | Filed herewith |

A We previously filed this exhibit on May 4, 2006, with the referenced exhibit number as an exhibit to our quarterly report on Form 10-Q (SEC File No. 000-18281) for the quarter ended March 25, 2006, and the previously filed exhibit is incorporated herein by reference.

B We previously filed this exhibit with the referenced exhibit number as an exhibit to our registration statement on Form S-1 (Registration No. 33-33128) filed on January 24, 1990, and the previously filed exhibit is incorporated herein by reference.

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- C We previously filed this exhibit on May 14, 1996, with the referenced exhibit number as an exhibit to our quarterly report on Form 10-Q (SEC File No. 000-18281) for the quarter ended March 30, 1996, and the previously filed exhibit is incorporated herein by reference.
- D We previously filed this exhibit on December 6, 2005, with the referenced exhibit number as an exhibit to our annual report on Form 10-K (SEC File No. 000-18281) for the year ended September 24, 2005, and the previously filed exhibit is incorporated herein by reference.
- E We previously filed this exhibit on May 11, 2004 with the referenced exhibit number as an exhibit to our quarterly report on Form 10-Q (SEC File No. 000-18281) for the quarter ended March 27, 2004, and the previously filed exhibit is incorporated herein by reference.
- F We previously filed this exhibit on January 31, 1990 with the referenced exhibit number as an exhibit to our Registration Statement on Form 8-A, and the previously filed exhibit is incorporated herein by reference.
- G We previously filed this exhibit on September 17, 2002 with the referenced exhibit number as an exhibit to our Registration Statement on Form 8-A (SEC File No. 000-18281), and the previously filed exhibit is incorporated herein by reference.
- H We previously filed this exhibit on July 27, 2006 with the referenced exhibit number as an exhibit to our current report on Form 8-K (SEC File No. 000-18281) dated July 27, 2006, and the previously filed exhibit is incorporated herein by reference.
- * In accordance with Rule 411 of the Securities Act of 1933, as amended, reference is made to the documents previously filed with the Securities and Exchange Commission, which documents are hereby incorporated by reference.

ITEM 17. UNDERTAKINGS.

(a) The undersigned registrant hereby undertakes:

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

- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

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- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

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

- (A) Each prospectus filed by a registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale

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prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

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

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

Table of Contents**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Bedford, Commonwealth of Massachusetts on July 27, 2006.

HOLOGIC, INC.

By: /s/ John W. Cumming
John W. Cumming

Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints John W. Cumming and Glenn P. Muir, and each of them singly, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-3 has been signed below by the following persons in the capacities and on the dates indicated.

| Name and Signature | Title(s) | Date |
|-----------------------------|--|---------------|
| /s/ John W. Cumming | Chairman, Chief Executive Officer and Director | July 27, 2006 |
| John W. Cumming | (principal executive officer) | |
| /s/ Glenn P. Muir | Director, Executive Vice President Finance and | July 27, 2006 |
| Glenn P. Muir | Administration and Treasurer | |
| | (principal financial officer) | |
| /s/ Robert H. Lavallee | Senior Vice President | July 27, 2006 |
| Robert H. Lavallee | (principal accounting officer) | |
| /s/ Jay A. Stein | Chairman Emeritus, Chief Technical Officer and | July 27, 2006 |
| Jay A. Stein | Director | |
| /s/ Laurie L. Fajardo, M.D. | Director | July 27, 2006 |
| Laurie L. Fajardo, M.D. | | |
| /s/ Irwin Jacobs | Director | July 27, 2006 |
| Irwin Jacobs | | |

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| | | |
|---------------------------|----------|---------------|
| /s/ David R. LaVance, Jr. | Director | July 27, 2006 |
| David R. LaVance, Jr. | | |
| /s/ Nancy L. Leaming | Director | July 27, 2006 |
| Nancy L. Leaming | | |
| /s/ Arthur G. Lerner | Director | July 27, 2006 |
| Arthur G. Lerner | | |
| /s/ Lawrence M. Levy | Director | July 27, 2006 |
| Lawrence M. Levy | | |

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| 5.01 | Opinion of Brown Rudnick Berlack Israels LLP. | Filed herewith |
| 23.01 | Consent of Brown Rudnick Berlack Israels LLP (contained in Exhibit 5.01). | Filed herewith |
| 23.02 | Consent of Ernst & Young LLP (Independent registered public accountants for Hologic). | Filed herewith |
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- * In accordance with Rule 411 of the Securities Act of 1933, as amended, reference is made to the documents previously filed with the Securities and Exchange Commission, which documents are hereby incorporated by reference.