

GUIDED THERAPEUTICS INC
Form POS AM
March 31, 2011

As filed with the Securities and Exchange Commission on March 31, 2011

Registration No. 333-169755

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Post-Effective Amendment No. 1
to
Form S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Guided Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	3845 (Primary Standard Industrial Classification Code Number)	58-2029543 (I.R.S. Employer Identification Number)
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5835 Peachtree Corners East, Suite D
Norcross, Georgia 30092
(770) 242-8723

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

Mark L. Faupel
President and Chief Executive Officer
Guided Therapeutics, Inc.
5835 Peachtree Corners East, Suite D
Norcross, Georgia 30092
(770) 242-8723

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

Copy to:

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From time to time following the effective date of this registration statement (Approximate date of commencement of proposed sale to the public) 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, check the following box. ý

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 post-effective amendment filed pursuant to Rule 462(d) 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated
filer

Accelerated filer

Non-accelerated
filer

Smaller reporting
company

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

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 to the registration statement on Form S-1 (File No. 333-169755) (the “Registration Statement”), is being filed pursuant to the undertakings in Item 17 of the Registration Statement to update and supplement the information contained in the Registration Statement, as originally declared effective by the Securities and Exchange Commission on December 8, 2010, to (i) include the information contained in the registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed on March 30, 2011, and (ii) make certain other updating revisions to the information contained herein.

The information in this prospectus is not complete and may be changed. The selling stockholders may not sell or offer these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell these securities and neither Guided Therapeutics nor the selling stockholders are soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS

Subject to completion, dated March 31, 2011

28,307,394 Shares of Common Stock

of

Guided Therapeutics, Inc.

This prospectus relates to 28,307,394 shares of our common stock issuable upon the exercise of warrants at an exercise price of \$0.65 per share. The shares offered by this prospectus may be sold from time to time by the selling stockholders listed in this prospectus at prevailing market prices or prices negotiated at the time of sale. See “Plan of Distribution” and “Selling Stockholders.”

We will not receive any cash proceeds from the sale of shares by the selling stockholders, but if the warrants are exercised in whole or in part, we will receive payment for the exercise price. We will pay the expenses of registering these shares.

Our common stock is dually listed on the OTCQB quotation systems under the symbol “GTHP.” The last reported sale price of our common stock on the OTCQB on March 30, 2011 was \$0.93 per share.

Investing in our common stock involves a high degree of risk. These risks are described under the caption “Risk Factors” that begins on page 3 of this prospectus.

Neither the Securities and Exchange Commission, or SEC, nor any state securities commission has approved or disapproved of the common stock that may be offered under this prospectus, nor have any of these organizations determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2011.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is an offer to sell only the common stock offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information appearing in this prospectus is accurate only as of the date hereof. Our business, financial condition, results of operations and prospects may have changed.

The terms “Guided Therapeutics,” “our,” “we,” and “us,” as used in this prospectus, refer to Guided Therapeutics, Inc. and its wholly owned subsidiary.

SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary is not complete and may not contain all of the information that may be important to you. We urge you to read the entire prospectus carefully, including the “Risk Factors” section, before making an investment decision.

Our Company

We are a medical technology company focused on developing innovative medical devices that have the potential to improve healthcare. Our primary focus is the development of our Light Touch cervical cancer detection technology and extension of our cancer detection platform into other cancers, especially lung and esophageal. Our technology, including products in research and development, primarily relates to biophotonics technology for the non-invasive detection of cancers, including cervical cancer.

We are a Delaware corporation, originally incorporated in 1992 under the name “SpectRx, Inc.,” and, on February 22, 2008, changed our name to Guided Therapeutics, Inc. At the same time, we renamed our wholly owned subsidiary, InterScan, which originally had been incorporated as “Guided Therapeutics.”

Non-Invasive Cervical Cancer Detection

We believe our cervical cancer detection device will provide a less invasive and painless alternative to conventional tests for cervical cancer detection. We also believe our cervical cancer detection product can improve patient well-being and reduce healthcare costs, since it reduces or eliminates pain, is convenient to use and provides rapid results at the point-of-care. We completed enrollment in our U.S. Food and Drug Administration (“FDA”) pivotal trial in 2008 and on November 18, 2010, the FDA accepted our completed premarket approval (“PMA”) application, effective September 23, 2010, for substantive review. On March 7, 2011, we announced that the FDA had inspected two clinical trial sites as part of its review process and raised no formal compliance issues. Assuming we receive FDA approval in 2011, we currently anticipate a late 2011 or early 2012 product launch, but cannot be assured we will be able to launch on that timetable, or at all.

Other Cancers

We believe our non-invasive cancer detection technology can be applied to other cancers in addition to cervical cancer. To that end, we are working with Konica Minolta Opto, Inc., a subsidiary of Konica Minolta, Inc., a Japanese corporation based in Tokyo (“Konica Minolta”) (see “Our Business—Lung and Esophageal Cancer Detection —Konica Minolta”) to adapt our cervical cancer detection technology for detection of lung cancer and esophageal cancer.

Recent Developments

On January 28, 2010, we entered into a new agreement with Konica Minolta for development of LightTouch prototype devices specific to the esophageal cancer detection application. In this agreement, Konica Minolta agreed to pay us an additional approximately \$1.6 million during 2010 for technical, regulatory and clinical development. In addition to the Barrett’s esophagus product, Konica Minolta retains the rights to apply our technology to lung cancer detection. As of December 31, 2010, we had received the total amount of \$1.6 million. On March 28, 2011, we extended this agreement for an additional year, effective May 1, 2011. Under the 2011 extension agreement, we will receive a total of \$1.72 million, with the first three payments of \$450,000 each due on May 1, August 1 and November 1, 2011, and the last payment of \$370,440 due on or before February 1, 2012.

On March 28, 2011, we also extended our exclusive negotiation and development agreement of optimization of our microporation system for manufacturing, regulatory approval, commercialization and clinical utility with Konica Minolta through April 2011. As of December 31, 2010, we had received a total of \$700,000 under this agreement. Under the 2011 extension agreement, we will receive a total of \$750,000, with the first payment of \$500,000 due on or before April 29, 2011 and the final \$250,000 payment due on or before October 29, 2011.

On February 26, 2010, we held a special meeting of stockholders to approve an amendment to our certificate of incorporation to reclassify our series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of Series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. Upon this reclassification, the \$9.1 million in outstanding 2007 Notes and accrued interest were automatically converted into 13,985,197 shares of common stock.

On September 10, 2010, we completed a private placement of 3,771,605 shares of our common stock at a purchase price of \$0.81 per share, pursuant to which we raised approximately \$3 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

We completed enrollment in our FDA pivotal trial in 2008 and on November 18, 2010, the FDA accepted our completed PMA application, effective September 23, 2010, for substantive review. On March 7, 2011, we announced that the FDA had inspected two clinical trial sites as part of its review process and raised no formal compliance issues.

In a letter from the U.S. Treasury Department dated October 29, 2010, we were notified that we were awarded a cash grant of \$244,479 under the federal Qualifying Therapeutic Discovery Project program for 2009. We received the cash on November 30, 2010.

As of March 10, 2011, we have received a total of \$611,362, from the exercise of outstanding warrants to purchase an aggregate of 940,556 shares of our common stock.

The Offering

Common stock that may be offered by selling stockholders 28,307,394 shares of our common stock. See “Selling Stockholders” on page 9.

Use of proceeds We will not receive any proceeds from the resale of the shares of common stock. However, if the warrants are exercised in whole or in part, we will receive payment for the exercise price. The terms of the warrants are described under “Description of Securities—Warrants and Options.” We expect to use any proceeds we receive from the exercise of the warrants for general corporate purposes, including working capital, capital expenditures and repaying or refinancing our debt obligations. See “Use of Proceeds” on page 9 .

Market for the common stock Our common stock is listed on the OTCQB quotation system under the symbol “GHTP.” See “Market for Our Common Stock and Related Stockholder Matters” on page 21.

Risk factors You should read “Risk Factors” beginning on page 3 for an explanation of the risks of investing in our common stock.

Our principal executive and operations facility is located at 5835 Peachtree Corners East, Suite D, Norcross, Georgia 30092, and our telephone number is (770) 242-8723.

RISK FACTORS

Any investment our company is subject to risks inherent to our business. Before making an investment decision, you should carefully consider the risks described below together with all of the other information included in this prospectus.

Although we will be required to raise additional funds sometime by the fourth quarter of 2011, there is no assurance that such funds can be raised on terms that we would find acceptable, or at all.

Additional debt or equity financing will be required for us to continue as a going concern. Management may seek to obtain additional funds for the financing of our cervical cancer detection business, through additional debt or equity financings and/or new collaborative arrangements. Management believes that additional financing, if obtainable, will be sufficient to support planned operations only for a limited period. Management has implemented operating actions to reduce cash requirements. Any required additional funding may not be available on terms attractive to us or at all.

If we cannot obtain additional funds or achieve profitability, we may not be able to continue as a going concern.

Because we must obtain additional funds through further financing transactions or through collaborative arrangements in order to execute our plans to launch our cervical cancer detection product line and to generate revenue from operations, there exists substantial doubt about our ability to continue as a going concern. Therefore, it will be necessary to raise additional funds. There can be no assurance that we will be able to raise these additional funds. If we do not secure additional funding when needed, we will be unable to conduct all of our product development efforts as planned, which may cause us to alter our business plan in relation to the development of our products. Even if we obtain additional funding, we will need to achieve profitability thereafter.

Our independent registered public accountants' report on our financial statements as of December 31, 2010, included with this prospectus, indicates that there is substantial doubt about our ability to continue as a going concern because we have suffered recurring losses from operations and have an accumulated deficit of \$78.4 million. We are also in default on payments due on some short-term loans.

Our management has implemented reductions in operating expenditures and reductions in some development activities. We have determined to make cervical cancer detection the focus of our business. We are managing the development of our other programs only when funds are made available to us via grants or contracts with government entities or strategic partners. However, there can be no assurance that we will be able to successfully implement or continue these plans.

If we cannot obtain additional funds when needed, we will not be able to implement our business plan.

We will require substantial additional capital to develop our products, including completing product testing and clinical trials, obtaining all required regulatory approvals and clearances, beginning and scaling up manufacturing, and marketing our products. We believe funds on hand as of date of this prospectus, along with funds from government contracts and grants, and other strategic partnerships, will be sufficient to support planned operations through the fourth quarter of 2011, but will not be sufficient to fund our planned operations to the point of commercial introduction of our cervical cancer detection product. Any failure to agree on a collaborative arrangement or to achieve adequate funding in a timely fashion would delay our development programs and could lead to abandonment of one or more of our development initiatives. To the extent we cannot obtain additional funding, our ability to

continue to develop and introduce products to market will be limited.

We have historically financed our operations through agreements with collaborative partners, grants and private sales of debt and public and private sales of equity securities.

Should we enter into an agreement with a collaborative partner, the obligations of a collaborative partner to fund our expenditures will be largely discretionary and will depend on a number of factors, including our ability to meet specified milestones in the development and testing of the relevant product. We may not be able to meet these milestones, or our collaborative partner may not continue to fund our expenditures. Debt and certain types of equity financing, if available, may involve restrictive covenants or other provisions that could limit how we conduct our business or finance our operations.

We do not have a long operating history, especially in the cancer detection field, which makes it difficult to evaluate our business.

Although we have been in existence since 1992, we have only just begun the process of commercializing our cervical cancer detection technology. Because limited historical information is available on our revenue trends and operations for our cancer detection programs it is difficult to evaluate our business. Our prospects must be considered in light of the substantial risks, expenses, uncertainties and difficulties encountered by entrants into the medical device industry, which is characterized by increasing intense competition and a high failure rate.

We have a history of losses, and we expect losses to continue.

We have never been profitable and we have had operating losses since our inception. We expect our operating losses to continue as we continue to expend substantial resources to complete development of our products, obtain regulatory clearances or approvals, and build our marketing, sales, manufacturing and finance organizations, and conduct further research and development. To date, we have engaged primarily in research and development efforts. The further development and commercialization of our products will require substantial development, regulatory, sales and marketing, manufacturing and other expenditures. We have only generated limited revenues from product sales. Our accumulated deficit was approximately \$78.4 million at December 31, 2010.

Our ability to sell our products is controlled by government regulations, and we may not be able to obtain any necessary clearances or approvals.

The design, manufacturing, labeling, distribution and marketing of medical device products are subject to extensive and rigorous government regulation, which can be expensive and uncertain and can cause lengthy delays before we can begin selling our products.

In the United States, the FDA's actions could delay or prevent our ability to sell our products, which would adversely affect our growth and strategy plans.

In order for us to market our products in the United States, we must obtain clearance or approval from the FDA. We cannot be sure that:

- we, or any collaborative partner, will make timely filings with the FDA;
- the FDA will act favorably or quickly on these submissions;
- we will not be required to submit additional information or perform additional clinical studies; or
- other significant difficulties and costs will not be encountered to obtain FDA clearance or approval.

It can take several years from initial filing of a PMA application and require the submission of extensive supporting data and clinical information. The FDA may impose strict labeling or other requirements as a condition of its clearance or approval, any of which could limit our ability to market our products. Further, if we wish to modify a product after FDA approval of a PMA application, including changes in indications or other modifications that could affect safety and efficacy, additional clearances or approvals will be required from the FDA. Any request by the FDA for additional data, or any requirement by the FDA that we conduct additional clinical studies, could result in a significant delay in bringing our products to market and substantial additional research and other expenditures. Similarly, any labeling or other conditions or restrictions imposed by the FDA could hinder our ability to effectively market our products. Any of the above actions by the FDA could delay or prevent altogether our ability to market and distribute our products. Further, there may be new FDA policies or changes in FDA policies that could be adverse to us.

In foreign countries, including European countries, we are also subject to government regulation, which could delay or prevent our ability to sell our products in those jurisdictions.

In order for us to market our products in Europe and some other international jurisdictions, we and our distributors and agents must obtain required regulatory registrations or approvals. We must also comply with extensive regulations regarding safety, efficacy and quality in those jurisdictions. We may not be able to obtain the required regulatory registrations or approvals, or we may be required to incur significant costs in obtaining or maintaining any regulatory registrations or approvals we receive. Delays in obtaining any registrations or approvals required for marketing our

products, failure to receive these registrations or approvals, or future loss of previously obtained registrations or approvals would limit our ability to sell our products internationally. For example, international regulatory bodies have adopted various regulations governing product standards, packaging requirements, labeling requirements, import restrictions, tariff regulations, duties and tax requirements. These regulations vary from country to country. In order to sell our products in Europe, we must maintain ISO 13485:2003 certification and CE mark certification, which is an international symbol of quality and compliance with applicable European medical device directives. Failure to maintain ISO 13485:2003 certification or CE mark certification or other international regulatory approvals would prevent us from selling in some countries in the European Union.

Even if we obtain clearance or approval to sell our products, we are subject to ongoing requirements and inspections that could lead to the restriction, suspension or revocation of our clearance.

We, as well as any potential collaborative partners, will be required to adhere to applicable FDA regulations regarding good manufacturing practice, which include testing, control, and documentation requirements. We are subject to similar regulations in foreign countries. Ongoing compliance with good manufacturing practice and other applicable regulatory requirements will be strictly enforced in the United States through periodic inspections by state and federal agencies, including the FDA, and in international jurisdictions by comparable agencies. Failure to comply with these regulatory requirements could result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, failure to obtain premarket clearance or premarket approval for devices, withdrawal of approvals previously obtained, and criminal prosecution. The restriction, suspension or revocation of regulatory approvals or any other failure to comply with regulatory requirements would limit our ability to operate and could increase our costs.

Our success largely depends on our ability to obtain and protect the proprietary information on which we base our products.

Our success depends in large part upon our ability to establish and maintain the proprietary nature of our technology through the patent process, as well as our ability to license from others patents and patent applications necessary to develop our products. If any of our patents are successfully challenged, invalidated or circumvented, or our right or ability to manufacture our products was to be limited, our ability to continue to manufacture and market our products could be adversely affected. In addition to patents, we rely on trade secrets and proprietary know-how, which we seek to protect, in part, through confidentiality and proprietary information agreements. The other parties to these agreements may breach these provisions, and we may not have adequate remedies for any breach. Additionally, our trade secrets could otherwise become known to or be independently developed by competitors.

As of December 31, 2010, we have been issued, or have rights to, 18 U.S. patents (including those under license). In addition, we have filed for, or have rights to, three U.S. patents (including those under license) that are still pending. There are additional international patents and pending applications. One or more of the patents we hold directly or license from third parties, including those for our cervical cancer detection products, may be successfully challenged, invalidated or circumvented, or we may otherwise be unable to rely on these patents. These risks are also present for the process we use or will use for manufacturing our products. In addition, our competitors, many of whom have substantial resources and have made substantial investments in competing technologies, may apply for and obtain patents that prevent, limit or interfere with our ability to make, use and sell our products, either in the United States or in international markets.

The medical device industry has been characterized by extensive litigation regarding patents and other intellectual property rights. In addition, the U.S. Patent and Trademark Office, or USPTO, may institute interference proceedings. The defense and prosecution of intellectual property suits, USPTO proceedings and related legal and administrative proceedings are both costly and time consuming. Moreover, we may need to litigate to enforce our patents, to protect our trade secrets or know-how, or to determine the enforceability, scope and validity of the proprietary rights of others. Any litigation or interference proceedings involving us may require us to incur substantial legal and other fees and expenses and may require some of our employees to devote all or a substantial portion of their time to the proceedings. An adverse determination in the proceedings could subject us to significant liabilities to third parties, require us to seek licenses from third parties or prevent us from selling our products in some or all markets. We may not be able to reach a satisfactory settlement of any dispute by licensing necessary patents or other intellectual property. Even if we reached a settlement, the settlement process may be expensive and time consuming, and the terms of the settlement may require us to pay substantial royalties. An adverse determination in a judicial or administrative proceeding or the failure to obtain a necessary license could prevent us from manufacturing and selling our products.

We may not be able to generate sufficient sales revenues to sustain our growth and strategy plans.

Our cervical cancer diagnostic activities have been financed to date through a combination of government grants, strategic partners and direct investment. Bringing this product to market is the main focus of our business. In order to adequately finance the completion of the FDA pivotal trial, complete product development and prepare for marketing of the cervical cancer detection product, additional capital will be needed. We need to complete the FDA filing process for our cervical cancer diagnostic product and obtain capital investment for product development and launch.

Additional product lines involve the modification of the cervical cancer detection technology for use in other cancers. These product lines are only in the earliest stages of research and development and are currently not projected to reach market for several years. Our goal is to receive enough funding from government grants and

contracts, as well as payments from strategic partners, to fund development of these product lines without diverting funds or other necessary resources from the cervical cancer program.

Because our products, which use different technology or apply technology in different ways than other medical devices, are or will be new to the market, we may not be successful in launching our products and our operations and growth would be adversely affected.

Our products are based on new methods of cancer detection. If our products do not achieve significant market acceptance, our sales will be limited and our financial condition may suffer. Physicians and individuals may not recommend or use our products unless they determine that these products are an attractive alternative to current tests that have a long history of safe and effective use. To date, our products have been used by only a limited number of people, and few independent studies regarding our products have been published. The lack of independent studies limits the ability of doctors or consumers to compare our products to conventional products.

If we are unable to compete effectively in the highly competitive medical device industry, our future growth and operating results will suffer.

The medical device industry in general and the markets in which we expect to offer products in particular, are intensely competitive. Many of our competitors have substantially greater financial, research, technical, manufacturing, marketing and distribution resources than we do and have greater name recognition and lengthier operating histories in the health care industry. We may not be able to effectively compete against these and other competitors. A number of competitors are currently marketing traditional laboratory-based tests for cervical cancer screening and diagnosis. These tests are widely accepted in the health care industry and have a long history of accurate and effective use. Further, if our products are not available at competitive prices, health care administrators who are subject to increasing pressures to reduce costs may not elect to purchase them. Also, a number of companies have announced that they are developing, or have introduced, products that permit non-invasive and less invasive cancer detection. Accordingly, competition in this area is expected to increase.

Furthermore, our competitors may succeed in developing, either before or after the development and commercialization of our products, devices and technologies that permit more efficient, less expensive non-invasive and less invasive cancer detection. It is also possible that one or more pharmaceutical or other health care companies will develop therapeutic drugs, treatments or other products that will substantially reduce the prevalence of cancers or otherwise render our products obsolete.

We have little manufacturing experience, which could limit our growth.

We do not have manufacturing experience that would enable us to make products in the volumes that would be necessary for us to achieve significant commercial sales, and we rely upon our suppliers. In addition, we may not be able to establish and maintain reliable, efficient, full scale manufacturing at commercially reasonable costs in a timely fashion. Difficulties we encounter in manufacturing scale-up, or our failure to implement and maintain our manufacturing facilities in accordance with good manufacturing practice regulations, international quality standards or other regulatory requirements, could result in a delay or termination of production. To date, our manufacturing activities have included since-discontinued products. We had substantial difficulties in establishing and maintaining manufacturing for these products and those difficulties impacted our ability to increase sales. Companies often encounter difficulties in scaling up production, including problems involving production yield, quality control and assurance, and shortages of qualified personnel.

Since we rely on sole source suppliers for several of our products, any failure of those suppliers to perform would hurt our operations.

Several of the components used in our products or planned products, are available from only one supplier, and substitutes for these components could not be obtained easily or would require substantial modifications to our products. Any significant problem experienced by one of our sole source suppliers may result in a delay or interruption in the supply of components to us until that supplier cures the problem or an alternative source of the component is located and qualified. Any delay or interruption would likely lead to a delay or interruption in our manufacturing operations. For our products that require premarket approval, the inclusion of substitute components could require us to qualify the new supplier with the appropriate government regulatory authorities. Alternatively, for our products that qualify for premarket notification, the substitute components must meet our product specifications.

Because we operate in an industry with significant product liability risk, and we have not specifically insured against this risk, we may be subject to substantial claims against our products.

The development, manufacture and sale of medical products entail significant risks of product liability claims. We currently have no product liability insurance coverage beyond that provided by our general liability insurance. Accordingly, we may not be adequately protected from any liabilities, including any adverse judgments or settlements, we might incur in connection with the development, clinical testing, manufacture and sale of our products. A successful product liability claim or series of claims brought against us that result in an adverse judgment against or settlement by us in excess of any insurance coverage could seriously harm our financial condition or reputation. In addition, product liability insurance is expensive and may not be available to us on acceptable terms, if at all.

The availability of third party reimbursement for our products is uncertain, which may limit consumer use and the market for our products.

In the United States and elsewhere, sales of medical products are dependent, in part, on the ability of consumers of these products to obtain reimbursement for all or a portion of their cost from third-party payors, such as government and private insurance plans. Any inability of patients, hospitals, physicians and other users of our products to obtain sufficient reimbursement from third-party payors for our products, or adverse changes in relevant governmental policies or the policies of private third-party payors regarding reimbursement for these products, could limit our ability to sell our products on a competitive basis. We are unable to predict what changes will be made in the reimbursement methods used by third-party health care payors. Moreover, third-party payors are increasingly challenging the prices charged for medical products and services, and some health care providers are gradually adopting a managed care system in which the providers contract to provide comprehensive health care services for a fixed cost per person. Patients, hospitals and physicians may not be able to justify the use of our products by the attendant cost savings and clinical benefits that we believe will be derived from the use of our products, and therefore may not be able to obtain third-party reimbursement.

Reimbursement and health care payment systems in international markets vary significantly by country and include both government-sponsored health care and private insurance. We may not be able to obtain approvals for reimbursement from these international third-party payors in a timely manner, if at all. Any failure to receive international reimbursement approvals could have an adverse effect on market acceptance of our products in the international markets in which approvals are sought.

Our success depends on our ability to attract and retain scientific, technical, managerial and finance personnel.

Our ability to operate successfully and manage our future growth depends in significant part upon the continued service of key scientific, technical, managerial and finance personnel, as well as our ability to attract and retain additional highly qualified personnel in these fields. We may not be able to attract and retain key employees when necessary, which would limit our operations and growth. Our President and Chief Executive Officer and our Vice President of Engineering have employment contracts with us, and none of our employees are covered by key person or similar insurance. In addition, if we are able to successfully develop and commercialize our products, we will need to hire additional scientific, technical, marketing, managerial and finance personnel. We face intense competition for qualified personnel in these areas, many of whom are often subject to competing employment offers.

We are significantly influenced by our directors, executive officers and their affiliated entities.

Our directors, executive officers and entities affiliated with them beneficially owned an aggregate of about 32.2% of our outstanding common stock as of December 31, 2010. These stockholders, acting together, would be able to exert significant influence on substantially all matters requiring approval by our stockholders, including the election of directors and the approval of mergers and other business combination transactions.

Our stock is thinly traded, so you may be unable to sell at or near ask prices or at all.

The shares of our common stock are traded on the OTCQB . Shares of our common stock are thinly traded, meaning that the number of persons interested in purchasing our common shares at or near ask prices at any given time may be relatively small or non-existent. This situation is attributable to a number of factors, including:

- we are a small company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume; and
- stock analysts, stock brokers and institutional investors may be risk-averse and be reluctant to follow a company such as ours that faces substantial doubt about its ability to continue as a going concern or to purchase or recommend the purchase of our shares until such time as we became more viable.

As a consequence, our stock price may not reflect an actual or perceived value. Also, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer that has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. A broader or more active public trading market for our common shares may not develop or if developed, may not be sustained. Due to these conditions, you may not be able to sell your shares at or near ask prices or at all if you need money or otherwise desire to liquidate your shares.

Trading in our common stock is subject to special sales practices and may be difficult to sell.

Our common stock is subject to the Securities and Exchange Commission's "penny stock" rule, which imposes special sales practice requirements upon broker-dealers who sell such securities to persons other than established customers or accredited investors. Penny stocks are generally defined to be an equity security that has a market price of less than

\$5.00 per share. For purposes of the rule, the phrase “accredited investors” means, in general terms, institutions with assets in excess of \$5,000,000, or individuals having a net worth in excess of \$1,000,000 or having an annual income that exceeds \$200,000 (or that, when combined with a spouse’s income, exceeds \$300,000). For transactions covered by the rule, the broker-dealer must make a special suitability determination for the purchaser and receive the purchaser’s written agreement to the transaction prior to the sale. Consequently, the rule may affect the ability of broker-dealers to sell our securities and also may affect the ability of our stockholders to sell their securities in any market that might develop.

Stockholders should be aware that, according to Securities and Exchange Commission Release No. 34-29093, the market for penny stocks has suffered from patterns of fraud and abuse. Such patterns include:

- control of the market for the security by one or a few broker-dealers that are often related to the promoter or issuer;
- manipulation of prices through prearranged matching of purchases and sales and false and misleading press releases;
- “boiler room” practices involving high-pressure sales tactics and unrealistic price projections by inexperienced sales persons;
 - excessive and undisclosed bid-ask differentials and markups by selling broker-dealers; and
- the wholesale dumping of the same securities by promoters and broker-dealers after prices have been manipulated to a desired level, along with the resulting inevitable collapse of those prices and with consequent investor losses.

Our management is aware of the abuses that have occurred historically in the penny stock market. Although we do not expect to be in a position to dictate the behavior of the market or of broker-dealers who participate in the market, management will strive within the confines of practical limitations to prevent the described patterns from being established with respect to our common stock.

Substantial future sales of shares of our common stock in the public market could cause our stock price to fall.

If our stockholders (including those persons who may become stockholders upon exercise of our warrants) sell substantial amounts of our common stock, or the public market perceives that stockholders might sell substantial amounts of our common stock, the market price of our common stock could decline significantly. Such sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that our management deems appropriate.

Our need to raise additional capital in the near future or to use our equity securities for payments could have a dilutive effect on your investment.

In order to continue operations, we will need to raise additional capital. We may attempt to raise capital through the public or private sale of our common stock or securities convertible into or exercisable for our common stock. In addition, from time to time we have issued our common stock or warrants in lieu of cash payments. If we sell additional shares of our common stock or other equity securities, or issue such securities in respect of other claims or indebtedness, such sales or issuances will further dilute the percentage of our equity that you own. Depending upon the price per share of securities that we sell or issue in the future, if any, your interest in us could be further diluted by any adjustments to the number of shares and the applicable exercise price required pursuant to the terms of the agreements under which we previously issued securities.

Two of our stockholders have asserted claims against us, the resolution of which could have a material adverse impact on our business, operating results or financial condition.

In October 2010, we received a letter from an attorney representing two of our stockholders, asserting claims for breach of contract and fraud in connection with transactions and occurrences in 2005 and 2009. See Item 3, "Legal Proceedings." Although we have denied the validity of these claims, there is no guarantee that the Company's defense would succeed if the Company is sued, and we may be have to pay damages awards or otherwise may enter into settlement arrangements in connection with these claims. Should we be unsuccessful or otherwise choose to settle such claims, the resulting damage awards or settlement arrangements could have material adverse effects on our business, operating results or financial condition. As the claims relate to the issuance of securities, we may be required to issue additional shares of our common stock or other securities convertible into or exchangeable for our common stock in payment of settlement of these claims, which would result in dilution to our stockholders. Even if the pending claims are not successful, litigation with respect to these claims could result in substantial costs and significant adverse impact on our reputation and divert management's attention and resources, which could have a material adverse effect on our business, operating results or financial condition.

FORWARD LOOKING STATEMENTS

Statements in this prospectus, which express "belief," "anticipation" or "expectation," as well as other statements that are not historical facts, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, or Exchange Act. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from historical results or anticipated results, including those identified in the foregoing "Risk Factors" and elsewhere in this prospectus.

Examples of these uncertainties and risks include, but are not limited to:

- access to sufficient debt or equity capital to meet our operating and financial needs;
- the effectiveness and ultimate market acceptance of our products;
- whether our products in development will prove safe, feasible and effective;
- whether and when we or any potential strategic partners will obtain approval from the FDA and corresponding foreign agencies;
- our need to achieve manufacturing scale-up in a timely manner, and our need to provide for the efficient manufacturing of sufficient quantities of our products;
 - the lack of immediate alternate sources of supply for some critical components of our products;
 - our patent and intellectual property position;
- the need to fully develop the marketing, distribution, customer service and technical support and other functions critical to the success of our product lines;
- the dependence on potential strategic partners or outside investors for funding, development assistance, clinical trials, distribution and marketing of some of our products; and
 - other risks and uncertainties described from time to time in our reports filed with the SEC.

Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by which, such performance or results will be achieved. Forward-looking information is based on information available at the time and/or management's good faith belief with respect to future events, and is subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the statements.

Forward-looking statements speak only as of the date the statements are made. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws. If we update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect thereto or with respect to other forward-looking statements.

USE OF PROCEEDS

All sales of the common stock covered by this prospectus will be by or for the account of the selling stockholders listed in this prospectus under "Selling Stockholders." As of March 10, 2011, we have received a total of \$611,362 from the exercise of outstanding warrants held by the selling stockholders to purchase an aggregate of 940,556 shares of our common stock. We may receive the proceeds from the exercise of the remaining warrants entitling the selling stockholders to purchase shares of our common stock. If all such remaining warrants held by the selling stockholders are exercised, we will receive \$0.65 per underlying share of common stock, or an aggregate of \$18,780,055, in cash proceeds.

We expect to use any proceeds we receive from the exercise of the warrants for general corporate purposes, including working capital, capital expenditures and repaying or refinancing our debt obligations.

SELLING STOCKHOLDERS

We issued warrants to purchase shares of common stock in private placement transactions or exchanges with our security holders exempt from registration under the Securities Act. This prospectus covers the resale of shares of common stock that we may issue upon exercise of these warrants.

The table below sets forth:

- the names of the selling stockholders;
- the number of shares of common stock, and the percentages of outstanding common stock, beneficially owned by the selling stockholders as of March 30, 2011, prior to the selling stockholders' offering of the shares of common stock pursuant to this prospectus;
- the maximum number of shares of common stock which may be offered by the selling stockholders pursuant to this prospectus; and
- the number of shares of common stock, and the percentages of outstanding common stock, to be beneficially owned by the selling stockholders after the offering of common stock pursuant to this prospectus, assuming all such common stock being offered is sold by the selling stockholders and that the selling stockholders do not acquire any additional shares of common stock.

The number of shares disclosed in the table below as "beneficially owned" are those beneficially owned as determined under the rules of the SEC. Such information is not necessarily indicative of ownership for any other purpose.

We obtained the information in the table below from the selling stockholders (other than the information regarding the percentages of outstanding common stock beneficially owned by each selling stockholder). Except as may be noted

below, none of the selling stockholders have, or within the past three years has had, any material relationship with us or any of our affiliates.

We cannot advise you as to whether the selling stockholders will in fact sell any or all of such shares of common stock. In addition, the selling stockholders may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of common stock in transactions exempt from the registration requirements of the Securities Act after the date on which they provided the information set forth in the table below. Only the selling stockholders referenced in the table below may sell the securities offered hereby, except as otherwise permitted by law. Changed information regarding the selling stockholders will be presented in a prospectus supplement or post-effective amendment to the registration statement of which this prospectus forms a part if and when necessary and required. Except as indicated below, no selling stockholder is a registered broker-dealer or an affiliate of a broker-dealer.

The number of shares of common stock underlying warrants assumes no adjustment in the number of shares issuable upon exercise of the warrants as a result of stock splits and stock dividends.

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Name of Selling Stockholder	Beneficial Ownership of Common Stock After Offering		Common Stock Being Offered Pursuant to this Prospectus (maximum number that may be sold)(1)	Beneficial Ownership of Common Stock Prior to Offering	
	Shares	Percentage		Shares	Percentage
John E. Imhoff (2)	10,786,552	21.03%	4,783,923	6,002,629	11.49 %
Kuekenhof Equity Fund, LP (2)	3,076,192	6.76%	1,736,574	1,339,618	2.92%
Ronald W. Allen (2)	879,376	1.85%	242,535	636,841	1.21%
Hart Management, LLC (2)	367,583	*	153,846	213,737	*
Ronald W. Hart (2)	974,102	2.86%	64,564	909,538	2.19%
William Zachary, Jr. (2)	387,057	*	64,564	322,493	*
Richard L. Fowler (3)	479,343	1.02 %	56,120	423,223	*
Lynne Imhoff (4)	324,451	*	157,214	167,237	*
Susan M. Imhoff (4)	366,376	*	148,648	217,728	*
John C. Imhoff (4)	180,000	*	50,000	130,000	*
Richard Blumberg (5)	3,793,767	7.70%	2,798,469	995,298	1.91%
Guided Medical Solutions, LLC (5)	2,143,129	3.69 %	1,038,462	1,104,667	3.92 %
Jimmy Funderburke (5)	158,478	*	50,637	107,841	*
J. E. Funderburke (5)	300,000	*	300,000	-	*
L. Peter Reininger (5)	359,328	*	109,449	249,879	*
Sternfeld Family Trust, c/o Daniel Sternfeld (6)	515,725	*	363,189	152,536	*
Webster Mrak & Blumberg Profit Sharing Plan, FBO Christine Mrak (6)	357,478	*	292,046	65,432	*
Webster Mrak & Blumberg Profit Sharing Plan, FBO Richard Blumberg (6)	349,849	*	285,808	64,041	*
David Salomon (6)	549,441	*	209,907	339,534	1.20 %
Germain Halegoua Annuity Trust UTA 6/16/95, FBO Jamie Halegoua (6)	406,393	*	170,369	236,024	*
The Arthur Kontos Foundation (6)	367,583	*	153,846	213,737	*
Bristol Investment Fund, Ltd. (6)	580,882	1.00 %	112,804	468,078	1.66 %
Mark E. & Maureen C. Brennan, Jt. Tenants (6)	133,723	*	109,001	24,722	*
Germain Halegoua Annuity Trust UTA 6/16/95, FBO Rachel Halegoua (6)	203,197	*	85,185	118,012	*
Germain Halegoua Annuity Trust UTA 6/16/95, FBO Jason Halegoua (6)	203,197	*	85,185	118,012	*
Germain Halegoua Annuity Trust UTA 6/16/95, FBO Germaine	203,197	*	85,185	118,012	*

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Halegoua (6)						
Webster Mrak & Blumberg Profit Sharing Plan, FBO James H. Webster (6)	158,750	*	76,923	81,827	*	
Richard Smouha (6)	129,936	*	76,896	53,040	*	
Catherine Tinney Rome Profit Sharing (6)	101,598	*	42,592	59,006	*	
Jeffrey Mosseri, IRA (6)	62,634	*	41,385	21,249	*	
Rhoda Intervivos Trust (6)	91,896	*	38,462	53,434	*	
Marshall Etra IRA (6)	91,896	*	38,462	53,434	*	
Joseph L. Rosenstreich IRA (6)	73,396	*	30,769	42,627	*	
Christopher Jordan IRA (6)	55,829	*	23,405	32,424	*	
Richard Steiner Rev. Trust UTD 8/25/92 (6)	52,143	*	30,769	21,374	*	
Daniella Laufer Test Trust UTD 7/20/01 (6)	36,634	*	15,385	21,249	*	
The Borns Sisters Trust (6)	32,462	*	8,500	23,962	*	
Kenneth S. Abramowitz Grat Trust (6)	10,273	*	2,700	7,573	*	
Yonah Jacob Borns - Weil Trust (6)	7,781	*	2,000	5,781	*	
Dolores Maloof	4,507,104	10.86%	4,227,186	279,918		2.45%
Ressler & Tesh, PLLC	1,766,871	3.05%	1,448,961	317,910		1.13%
Easton Hunt Capital Partners, LP	3,554,795	6.13%	1,061,663	2,493,132		8.85%
Dolphin Offshore Partners, L.P.	2,763,861	4.76%	769,337	1,994,524		7.08%
Bobby Webb Bowie	1,523,972	2.63%	638,883	885,089		3.14%
Opaline International, Inc.	892,430	1.54%	615,384	277,046	*	
Michael Moore	626,085	1.08%	411,957	214,128		*
Walter J. Weadock	918,956	1.58%	384,615	534,341		1.90%
Chestnut Ridge Partners, LP	384,615	*	384,615	-	*	

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Name of Selling Stockholder	Beneficial Ownership of Common Stock After Offering		Common Stock Being Offered Pursuant to this Prospectus (maximum number that may be sold)(1)	Beneficial Ownership of Common Stock Prior to Offering	
	Shares	Percentage		Shares	Percentage
Isaak I. Halegoua	812,787	1.40 %	340,738	472,049	1.67 %
International Developers Group #1, LLC	400,286	*	322,822	77,464	*
Simon Halegoua	609,591	1.05 %	255,554	354,037	1.25 %
Evan Fishel	485,579	*	212,088	273,491	*
Benny H. Screws	233,032	*	189,870	43,162	*
Robert E. Johnson	174,400	*	174,400	-	*
Jamie Halegoua	406,393	*	170,369	236,024	*
Sherman C. Wade	210,148	*	169,480	40,668	*
TABAS, LLLP	202,166	*	163,043	39,123	*
Peter M. Mondalek	275,143	*	161,411	113,732	*
Murphy & Durieu, L.P.	245,227	*	156,131	89,096	*
Hana Smouha	357,583	*	153,846	203,737	*
Thomas E. Cain	366,980	*	153,846	213,134	*
Dayton Holdings International Inc.	303,846	*	153,846	150,000	*
Claude Mosseri-Marlio	367,491	*	153,808	213,683	*
Christopher Jordan	191,670	*	135,526	56,144	*
Mark A. Samuels	560,269	*	133,059	427,210	1.52 %
Darleen Helrich	269,875	*	130,769	139,106	*
Douglas Millar	120,000	*	120,000	-	*
David Musket	415,237	*	116,060	299,177	1.06 %
Kensington Partners, LP	395,009	*	109,953	285,056	*
Joseph Stravato	95,000	*	95,000	-	*
Ron Moorhead	77,000	*	77,000	-	*
OTAPE Investments, LLC	76,937	*	76,937	-	*
Keith Ignotz	276,398	*	76,937	199,461	*
Richard W. Enersen	183,791	*	76,923	106,868	*
Jeffrey Belmont	183,791	*	76,923	106,868	*
21st Century Digital Industries Fund, LP	183,791	*	76,923	106,868	*
James H. Webster	158,750	*	76,923	81,827	*
Gary S. Kaplan	158,750	*	76,923	81,827	*
Andrew Lenza	76,923	*	76,923	-	*
Alan Hoberman	76,923	*	76,923	-	*
Minnich Properties, Inc	73,000	*	73,000	-	*
Gregory S. Petrie	89,182	*	72,668	16,514	*
William Arthur, III	156,592	*	56,120	100,472	*
Jill T. Gentile	56,506	*	43,601	12,905	*
Forest Hills, LLC	167,537	*	43,040	124,497	*
Marvin Mermelstein	42,547	*	42,547	-	*
Joseph Mermelstein	42,547	*	42,547	-	*

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Sue Steele	40,000	*	40,000	-	*
Douglas Schmidt	138,220	*	38,474	99,746	*
Michael Maiello	121,718	*	38,462	83,256	*
Saul Schwartzman	91,745	*	38,462	53,283	*
Robert Brubaker	79,376	*	38,462	40,914	*
Richard Simpson	79,376	*	38,462	40,914	*
Lorianne O'Connor	38,462	*	38,462	-	*
Nangarhil, LLC	91,896	*	38,462	53,434	*
Maryse Hops	91,896	*	38,462	53,434	*
Lavorsia D. Jordan	91,896	*	38,462	53,434	*
David Naggar	91,896	*	38,462	53,434	*
Andrew Gluck	91,896	*	38,462	53,434	*
Stacia J. Hachem	91,745	*	38,462	53,283	*
William Bryce Combs	91,896	*	38,462	53,434	*
Hytek International LTD	116,082	*	32,312	83,770	*
Jerry Fulks	63,500	*	30,769	32,731	*
ProMed Partners, L.P.	86,631	*	22,200	64,431	*

Name of Selling Stockholder	Beneficial Ownership of Common Stock After Offering		Common Stock Being Offered Pursuant to this Prospectus (maximum number that may be sold)(1)	Beneficial Ownership of Common Stock Prior to Offering	
	Shares	Percentage		Shares	Percentage
George Goll	26,754	*	21,800	4,954	*
Congregation Judah and Isreal	21,220	*	21,220	-	*
Carol Brubaker	50,750	*	15,385	35,365	*
CGS - fbo Maron Abifadel	30,770	*	15,385	15,385	*
Barbara Jo Bristol	15,385	*	15,385	-	*
Gloria Mosseri	26,072	*	15,385	10,687	*
Mark Puckett	14,400	*	14,400	-	*
Roy Buster Reeves	14,400	*	14,400	-	*
Bob Peek	14,400	*	14,400	-	*
Brian McCloskey	10,000	*	10,000	-	*
David M. Stone	125,983	*	8,600	117,383	*
A. Vivette Ancona	18,379	*	7,692	10,687	*
Bald Eagle Fund, Ltd.	19,568	*	5,447	14,121	*
Robert Gorgia	5,000	*	5,000	-	*
Douglass Loud	5,000	*	5,000	-	*
Richard Keim	19,395	*	5,000	14,395	*
Shane Cheek	5,000	*	5,000	-	*
James Conti	3,000	*	3,000	-	*
Maria Nevitt	11,412	*	3,000	8,412	*
Bruce Goldstein	11,382	*	3,000	8,382	*
Brian Battista	2,500	*	2,500	-	*
Joseph Vellino	2,500	*	2,500	-	*
Barry Kurokawa	5,422	*	1,240	4,182	*
William Lautman	1,818	*	60	1,763	*
TOTAL	57,837,729	69 %	29,832,949	28,004,780	33 %

* Denotes less than 1%.

- (1) Represents shares issuable upon exercise of warrants.
- (2) The selling stockholder serves on our board of directors.
- (3) The selling stockholder serves as one of our officers.
- (4) Represents relations of directors or officers of the Company.
- (5) Represents business associates of the Company.
- (6) Represents Trust Accounts.

PLAN OF DISTRIBUTION

Any or all of the shares of common stock offered by the selling stockholders may be offered for sale and sold by or on behalf of the selling stockholders from time to time in varying amounts, including in block transactions, on the over-the-counter market, in privately negotiated transactions, or otherwise (other than underwritten offerings), at prices prevailing in such market or as may be negotiated at the time of the sale. The shares of common stock may be

sold by the selling stockholders directly to one or more purchasers, through agents designated from time to time or to or through broker-dealers designated from time to time. In the event the shares of common stock are publicly offered through broker-dealers or agents, the selling stockholders may enter into agreements with respect to such offerings. Those broker-dealers or agents may receive compensation in the form of discounts, concessions or commissions from the selling stockholders or the purchasers of the shares of common stock. The selling stockholders and any broker-dealers or agents that participate in the distribution of the shares of common stock may be deemed to be underwriters within the meaning of the Securities Act, and any profit on the sale of the shares by them and any discounts, commissions or concessions received by them may be deemed to be underwriting discounts and commissions under the Securities Act. At the time a particular offer of shares of common stock is made by the selling stockholders, to the extent required, a prospectus supplement will be distributed that will set forth the aggregate number of shares being offered, and the terms of the offering, including the public offering price thereof, the name or names of any broker-dealers or agents, any discounts, commissions and other items constituting compensation from, and the resulting net proceeds to, the selling stockholders.

Any supplement to this prospectus and, if necessary, a post-effective amendment to the registration statement of which this prospectus is a part, will be filed with the SEC to reflect the disclosure of additional information with respect to the distribution of the securities.

To the best of our knowledge, there are currently no plans, arrangements or understandings between any selling stockholders and any broker, dealer, agent or underwriter regarding the sale of the common stock by the selling stockholders.

We have agreed to indemnify the selling stockholders against specified liabilities under the Securities Act and to pay substantially all of the expenses incidental to the registration, offering and sale of the common stock to the public other than commissions, brokerage fees and stock transfer taxes applicable to the common stock sold by the selling stockholders.

In order to comply with the securities laws of certain states, sales of shares offered hereby to the public in such states may be made only through broker-dealers who are registered or licensed in such states. Sales of shares offered hereby must also be made by the selling stockholders in compliance with other applicable state securities laws and regulations.

DESCRIPTION OF SECURITIES

We are authorized to issue 105 million shares of stock, in two classes: 100 million shares of common stock and 5 million shares of preferred stock. As of November 30, 2010, there were 46,840,950 shares of common stock outstanding, which were held of record by 193 stockholders and no shares of preferred stock outstanding.

Common Stock

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by the board out of funds legally available therefor and in liquidation proceedings. Holders of common stock have no preemptive or subscription rights and there are no redemption rights with respect to such shares.

Preferred Stock

Our board is authorized, without further stockholder action, to issue preferred stock in one or more series and to fix the voting rights, liquidation preferences, dividend rights, repurchase rights, conversion rights, redemption rights and terms, including sinking fund provisions, and certain other rights and preferences, of the preferred stock.

Although there is no current intention to do so, our board may, without stockholder approval, issue shares of a class or series of preferred stock with voting and conversion rights that could adversely affect the voting power or dividend rights of the holders of common stock and may have the effect of delaying, deferring or preventing a change in control.

Warrants and Options

We have issued warrants to purchase our common stock from time to time in connection with certain financing arrangements. Currently, there are warrants exercisable for an aggregate of 29,421,459 shares of common stock outstanding. Warrants exercisable for 28,892,393 of these shares have an exercise price of \$0.65 per share and expire on March 1, 2013, warrants exercisable for 151,905 of these shares have an exercise price of \$0.005 per share and expire on August 25, 2014 and warrants exercisable for 377,161 of these shares have an exercise price of \$1.01 per share and expire on September 14, 2015. All outstanding warrant agreements provide for antidilution adjustments in the event of certain mergers, consolidations, reorganizations, recapitalizations, stock dividends, stock splits or other changes in our corporate structure. The shares of common stock to be offered hereby are issuable upon exercise of these warrants.

As of, March 20, 2011, we have issued options to purchase a total of 6,103,167 shares of our common stock pursuant to various equity incentive plans, at a weighted average exercise price of \$0.45 per share. Recommendations for option grants under our equity incentive plans are made by the compensation committee of our board, subject to ratification by the full board. The compensation committee may issue options with varying vesting schedules, but all options granted pursuant to our equity incentive plans must be exercised within ten years from the date of grant.

Registration Rights of Certain Holders

The holders of certain of our outstanding warrants or their transferees are entitled to certain registration rights with respect to the registration of the shares issuable upon exercise of those warrants under the Securities Act. These rights are provided under the terms of loan agreement, first executed on March 1, 2007.

OUR BUSINESS

Overview

We are a medical technology company focused on developing innovative medical devices that have the potential to improve healthcare. Our primary focus is the development of our Light Touch cervical cancer detection technology and extension of our cancer detection platform into other cancers, especially lung and esophageal. Our technology, including products in research and development, primarily relates to biophotonics technology for the non-invasive detection of cancers, including cervical cancer.

We are a Delaware corporation, originally incorporated in 1992 under the name “SpectRx, Inc.,” and, on February 22, 2008, changed our name to Guided Therapeutics, Inc. At the same time, we renamed our wholly owned subsidiary, InterScan, which originally had been incorporated as “Guided Therapeutics.”

Non-Invasive Cervical Cancer Detection

We believe our cervical cancer detection device will provide a less invasive and painless alternative to conventional tests for cervical cancer detection. We also believe our cervical cancer detection product can improve patient well-being and reduce healthcare costs, since it reduces or eliminates pain, is convenient to use and provides rapid results at the point-of-care. We completed enrollment in our FDA pivotal trial in 2008 and on November 18, 2010, the FDA accepted our completed PMA application, effective September 23, 2010, for substantive review. On March 7, 2011, we announced that the FDA had inspected two clinical trial sites as part of its review process and raised no formal compliance issues. Assuming we receive FDA approval in 2011, we currently anticipate a late 2011 or early 2012 product launch, but cannot be assured we will be able to launch on that timetable, or at all.

Other Cancers

We believe our non-invasive cancer detection technology can be applied to other cancers in addition to cervical cancer. To that end, we are working with Konica Minolta Opto, Inc., a subsidiary of Konica Minolta, Inc., a Japanese corporation based in Tokyo (“Konica Minolta”) (see “—Lung and Esophageal Cancer Detection —Konica Minolta”) to adapt our cervical cancer detection technology for detection of lung cancer and esophageal cancer.

Our Business Strategy

Our mission is to build a profitable business that develops and commercializes medical products that improve people’s lives and increases stockholder value. To achieve this mission, we have completed the FDA pivotal trial for our cervical cancer diagnostic product, filed our PMA application with the FDA and have begun to raise capital for the development and launch of this product. Our cervical cancer diagnostic activities have been financed to date through a combination of government grants, strategic partners and direct investment. Bringing this product to market is the main focus of our business. In order to adequately finance the completion of the FDA review process, complete product development and prepare for marketing of our cervical cancer detection product, additional capital will be needed; however, we cannot be assured of the availability of adequate capital (see “Risk Factors”).

We believe that our technology, as developed for cervical cancer detection, can be modified and then applied to other cancers. Because development of our technology for additional cancers is costly and resource intensive, we have been seeking a new strategic partner that can help defray costs and otherwise assist in the expansion of our cancer detection technology into other cancers. This has resulted in a series of six-month and one-year exclusive negotiation and feasibility study agreements with Konica Minolta, the most recent of which is a one-year development agreement for extending our technology into the areas of lung and esophageal cancer. This agreement expires on April 30, 2011, but

can be extended for an additional year, after which both parties would consider executing a long-term agreement license and marketing agreement. For each year of the current contract, we are paid a minimum fee of \$750,000. In addition, on January 28, 2010, we executed a new agreement with Konica Minolta for development of LightTouch prototype devices specifically for the esophageal cancer detection application. In this agreement, Konica Minolta paid us an additional approximately \$1.6 million during 2010 for technical, regulatory and clinical development of prototype devices for esophageal cancer detection (see “—Lung and Esophageal Cancer Detection —Konica Minolta”).

Industry Overview

Cervical Cancer Detection

Background

According to the American Cancer Society, cancer is a group of many related diseases. All forms of cancer involve the out-of-control growth and spread of abnormal cells. Normal body cells grow, divide, and die in an orderly fashion. Cancer cells, however, continue to grow and divide and can spread to other parts of the body. In America, half of all men and one-third of all women will develop cancer during their lifetimes. According to the American Cancer Society, the sooner a cancer is found and treatment begins, the better a patient’s chances are of being cured. We began investigating the applications of our technologies to cancer detection before 1997, when we initiated a market analysis for these uses. We concluded that our biophotonic technologies had applications for the detection of a variety of cancers through the exposure of tissue to light. We selected cervical cancer and skin cancer from a list of the ten most attractive applications as categories of cancer to pursue initially, and currently are focused primarily on the development of our non-invasive cervical cancer detection product.

Cervical Cancer

Cervical cancer is a cancer that begins in the lining of the cervix; the lower part of the uterus. Cervical cancer forms over time and may spread to other parts of the body if left untreated. There is generally a gradual change from a normal cervix to a cervix with precancerous cells to cervical cancer. For some women, precancerous changes may go away without any treatment. While the majority of precancerous changes in the cervix do not advance to cancer, if precancers are treated, the risk that they will become cancers can be greatly reduced. The Pap smear, which involves a sample of cervical tissue being placed on a slide and observed in a laboratory, is currently the most common form of cervical cancer screening.

Cervical Cancer Market

The American Cancer Society estimated that in 2010 about 12,200 cases of invasive cervical cancer would be diagnosed and predicted 4,210 deaths from cervical cancer in the U.S. According to published data, cervical cancer results in about 200,000 deaths annually worldwide, with 470,000 new cases reported each year.

We believe that our major market opportunities related to cervical cancer are in diagnosis and screening. Since the introduction of better screening and diagnostic methods, the number of cervical cancer deaths in the U.S. has declined dramatically, due mainly to the increased use of the Pap smear screening test. However, the Pap smear screening test has a wide variation in sensitivity, which is the ability to detect the disease, and specificity, which is the ability to exclude false positives. A study by Duke University for the U.S. Agency for Health Care Policy and Research published in 1999 showed Pap test performance ranging from a sensitivity of 22% and specificity of 78% to sensitivity of 95% and specificity of 10%. About 60 million Pap tests are given annually in the U.S. The average price of a Pap test in the U.S. is about \$26. New technologies improving the sensitivity and specificity of Pap smear screening have recently been introduced and are finding acceptance in the marketplace.

After screening for cervical cancer by use of a Pap smear, if necessary, a visual examination of the cervix using a colposcope is usually followed by a biopsy, or tissue sampling at one or more locations. This method looks for visual changes attributable to cancer. There are about two million colposcope examinations annually in the U.S. and Europe. In 2003, the average cost of a stand-alone colposcope examination in the U.S. was \$185 and the average cost of a colposcopy with biopsy was \$277.

In 2006, a new vaccine for certain strains of the human papilloma virus, or HPV, was approved by the FDA. Most cervical cancers are associated with certain strains of HPV. The vaccine is administered in three doses, and according to guidelines, preferably to girls before they become sexually active. The approved vaccine is effective against 70% of the strains of HPV thought to be responsible for cervical cancer. Due to the limited availability and lack of 100% protection against all potentially cancer-causing strains of HPV, we believe that the vaccine will have a limited impact on the cervical cancer screening and diagnostic market for many years.

Our Non-invasive Cervical Cancer Product

We are developing a non-invasive cervical cancer detection product. The product is based on our proprietary biophotonic technology. The device is expected to identify cervical cancers and precancers painlessly, non-invasively and at the point-of-care by scanning the cervix with light, then analyzing the light reflected or emanating from the cervix. The information presented by the light would be used to indicate the likelihood of cervical cancer or precancers and/or to produce a map or image of diseased tissue. This test, unlike the Pap smear test or biopsy, has the potential to preserve the perspective and positional information of disease on the cervix, allowing for more accurate diagnosis. Our system also could allow doctors to make intelligent choices in triaging patients for biopsy or treatment and potentially for selecting biopsy sites that could be expanded for use in assisting in the detection of cancerous

margins for cancer removal. Our product, in addition to detecting the structural changes attributed to cervical cancer, is also expected to detect the biochemical changes that precede the development of visual lesions. In this way, cervical cancer may be detected earlier in its development, which should increase the chances of effective treatment. The product is expected to incorporate a single-use, disposable calibration and alignment component. FDA approval of the intended use of our device is required and initial approval may be for a limited set of the above potential capabilities. Our strategy is to launch our cervical cancer detection product first in the developed countries of Europe, while continuing steps to procure FDA approval in the U.S.

To date, more than 3,000 women have been tested with various prototype devices in multiple clinical settings. During 2000, we conducted human clinical feasibility studies of laboratory prototypes at two U.S. research centers, detecting 31% more cervical precancerous lesions than conventional Pap tests. The results were presented at the World Health Organization/European Research Organization on Genital Infection and Neoplasia Joint Experts Conference in Paris in April 2000. The study population included 133 women scheduled for colposcopy and biopsy, if indicated. A total of 318 tissue-specific comparisons were made between our device and colposcopy/biopsy results. Of the 318 patients included in this study, 20 had high-grade precancers, 36 had low-grade precancers, 146 had benign lesions and 116 had normal tissues. Compared to the Pap test, our product detected 31% more precancers and 25% more high-grade precancers without increasing the false positive rate.

In 2005, we continued to conduct our pivotal clinical trial, which had collected data on over 900 women by the end of the year. In 2005, we also completed work on our commercial prototype. In 2006 and 2007, we continued to enroll subjects in our pivotal clinical trial and, by the end of 2007, had enrolled 1,400 subjects.

In September 2006, we announced that the National Cancer Institute (“NCI”) awarded a fifth grant of approximately \$690,000 for development of our non-invasive cervical cancer detection technology. This grant was used to further the ongoing FDA pivotal clinical trial. In 2006 and 2007, we received approximately \$523,000 and \$398,000, respectively, of NCI grant funds. On October 5, 2009, we were awarded a \$2.5 million matching grant by the NCI to bring to market and expand the array features for our LightTouch non-invasive cervical cancer detection technology. The award provides resources to complete the regulatory process and begin manufacturing ramp up for the device and single-patient-use disposable cancer detection device and will be received over a period of three years. Under the award, we recorded revenue of \$667,000 in 2010 and \$339,000 in 2009. We are eligible to receive a maximum of \$517,000 in 2011.

In June 2007, we announced that we had successfully completed an audit of our quality system and were recertified under ISO 13485:2003. This designation means that we are eligible to issue a conformity mark (“CE mark”) for our non-invasive cervical cancer detection device once development is complete. The CE mark is necessary to sell our non-invasive cervical cancer detection device in the European Union and other markets.

We completed enrollment in our FDA pivotal trial in 2008 and on November 18, 2010, the FDA accepted our completed premarket approval (“PMA”) application, effective September 23, 2010, for substantive review. On March 7, 2011, we announced that the FDA had inspected two clinical trial sites as part of its review process and raised no formal compliance issues. Assuming we receive FDA approval in 2011, we currently anticipate a late 2011 or early 2012 product launch, but cannot be assured we will be able to launch on that timetable, or at all.

Sales or leases of the Light Touch cervical cancer detection product are expected to include a single-patient-use disposable patient interface. We expect the device itself to be priced at less than \$20,000, with the disposable interface priced around \$30 to \$40. Profit margins on the device could be approximately 90%. In the United States, we plan on increasing our own currently 10-person sales force, which will initially focus on early adopters in the larger population centers. Internationally, we plan on contracting with country-specific or regional distributors. We believe that the international market will be larger than the U.S. market. We have been in contact with more than 100 potential distributors and expect to announce agreements over the next several months.

The market for cervical cancer screening is currently dominated by lab-based cytological screening of samples obtained from patients. The market for primary screening is dominated by Cytyc, Inc. (acquired by Hologic, Inc.), which markets the Thin Prep Pap test and Digene, Inc. (acquired by Qiagen, Inc.), which markets another method of cervical cancer screening, HPV detection. Qiagen is attempting to gain permission to use its device for primary screening. The Qiagen HPV test is already approved for use as a follow-up to ambiguous Pap test results and as an adjunct to the Pap test for screening women aged 30 and over. We have conducted marketing research related to the cervical cancer market and the impact of the growth of the lab-based cytological screening products. We are reviewing the impact of the changing competitive landscape related to our product development pace and our initial and potential positioning. We will have to demonstrate clinical and commercial effectiveness to be able to change current medical practice behavior and capture market share and cannot be sure that we will be able to do so.

Lung and Esophageal Cancer Detection

According to the World Health Organization, there are 1.2 million cases of lung cancer diagnosed each year worldwide, with at least half of these resulting in death. In the United States, lung cancer is the leading cause of death

due to cancer, with 215,000 new cases and more than 161,000 deaths annually, according to the American Cancer Society. Lung cancer is also a serious health issue in other parts of the world where cigarette smoking is endemic (Japan, for example, with more than 63,000 deaths annually). Despite this enormous and tragic toll, no effective method of early screening has been able to improve upon these rates. Historically, chest x-rays have been employed, but typically these identify later stage cancers, which are difficult to cure. Sputum tests to identify cancer markers in at-risk individuals have not been widely adopted and CT or other scanning technology is likely to be too expensive in the foreseeable future for screening or widespread use. Once a mass has been identified, usually by chest x-ray or physical symptoms such as bloody sputum, a bronchoscopy with biopsy and histopathological diagnosis of the mass is performed.

Worldwide, new cases of esophageal cancer are estimated at 410,000, with more than 16,000 new cases and 14,000 deaths in the U.S. alone. In Japan, esophageal cancer is responsible for 11,300 deaths annually. A precursor to esophageal cancer is a condition known as Barrett's esophagus, which is caused by excessive acid reflux. Patients with this condition may be subjected to repeated and sometimes poorly directed biopsies of areas of the esophagus thought to contain cancerous or pre-cancerous (neoplastic) cells. Because there may be several areas of suspicion, the clinical challenge is to try to identify those areas of the esophagus with greatest likelihood of neoplastic change. Endoscopic techniques, using regular white light, have only limited ability to accomplish this and defensively-minded practitioners often resort to multiple biopsies that are expensive and painful in order to increase the odds of finding disease.

Since the processes associated with cancer development show similarities between cervical cancer and other cancers, we believe our technology, if integrated with an endoscopic system, may have the potential to more accurately, or in an earlier state, detect lung and esophageal cancers and precancers. To that end, we are working with Konica Minolta to adapt our cervical cancer detection technology for detection of lung cancer and esophageal cancer (see “—Konica Minolta”). However, we have not as yet conducted clinical trials to evaluate this potential. We recently announced that we had received Institutional Review Board approval for testing the technology in humans and were granted a non-significant risk designation for the product. We have two clinics in the Atlanta, Georgia metropolitan area where we will conduct a small scale study with 30 to 40 subjects, which should take 60 to 90 days to enroll, depending on availability of qualified subjects. We expect to begin the study in the second or third quarter of 2011. The goal of the study is to establish feasibility of the product design and clinical implementation. Qualified subjects will undergo a standard Barrett’s endoscopic exam and also be tested with our technology. Standard biopsies will be taken, against which our measurements will be compared.

Konica Minolta

On April 28, 2008, we executed a six-month option to license and no-shop agreement with Konica Minolta. In return for limited option to license and negotiation rights to certain of our technology, we were paid \$250,000. The agreement was renewed for an additional six-month period starting on October 28, 2008, for which we were paid an additional \$250,000. In addition, Konica Minolta purchased prototype materials and devices from us for a sum of approximately \$100,000. The primary objective of the collaboration was to explore the feasibility of adapting our cervical cancer detection technology to other cancers and to determine potential markets for these products in anticipation of a development agreement.

On April 28, 2009, we signed a one-year exclusive negotiation and development agreement of optimization of our microporation system for manufacturing, regulatory approval, commercialization and clinical utility with Konica Minolta. In April 2010, we renewed the agreement for an additional year, with an option for an additional one-year term thereafter. We will be paid a total fee during the term of this agreement of \$750,000. As of December 31, 2010, we had received a total of \$700,000. On March 28, 2011, we extended this agreement for an additional year, effective May 1, 2011. Under the 2011 extension agreement, we will receive a total of \$750,000, with the first payment of \$500,000 due on or before April 29, 2011 and the final \$250,000 payment due on or before October 29, 2011.

On January 28, 2010, we entered into a new agreement with Konica Minolta for development of LightTouch prototype devices specific to the esophageal cancer detection application. In this agreement, Konica Minolta agreed to pay us an additional approximately \$1.6 million during 2010 for technical, regulatory and clinical development. In addition to the Barrett’s esophagus product, Konica Minolta retains the rights to apply our technology to lung cancer detection. As of December 31, 2010, we have received the total amount of \$1.6 million. On March 28, 2011, we extended this agreement for an additional year, effective May 1, 2011. Under the 2011 extension agreement, we will receive a total of \$1.72 million, with the first three payments of \$450,000 each due on May 1, August 1 and November 1, 2011, and the last payment of \$370,440 due on or before February 1, 2012.

Research, Development and Engineering

To date, we have been engaged primarily in the research, development and testing of our cancer detection product, including research for and development of our core biophotonic technologies, as well as our since-discontinued glucose monitoring, diabetes detection, infant jaundice products. From inception to December 31, 2010, we incurred about \$52.4 million in research and development expenses, net of about \$19.2 million reimbursed through collaborative arrangements. Research and development costs were about \$1.8 million and \$1.4 million in 2010 and 2009, respectively.

Since 2008, we have focused our research and development and our engineering resources almost exclusively on development of our cervical cancer detection system, with only limited support of other programs funded through government contracts or third party funding, such as Konica Minolta. Because we have not yet launched commercial versions of our technology, only prototypes of our cervical cancer detection products have been tested. Because our research and clinical development programs for other cancers are at a very early stage, substantial additional research and development and clinical trials will be necessary before commercial prototypes of our cancer detection products can be produced.

Several of the components used in our products or planned products are available from only one supplier, and substitutes for these components could not be obtained easily or would require substantial modifications to our products.

Manufacturing, Sales Marketing and Distribution

We have only limited experience in the production planning, quality system management, facility development, and production scaling that will be needed to bring production to commercial levels. We will need to develop additional expertise in order to successfully manufacture, market and distribute any future products.

Patents

We have pursued a course of developing and acquiring patents and patent rights and licensing technology. Our success depends in large part on our ability to establish and maintain the proprietary nature of our technology through the patent process and to license from others patents and patent applications necessary to develop our products. As of December 31, 2010 we have 18 granted U.S. patents relating to our cancer technology and three pending U.S. patent applications.

One or more of the patents held directly by us or licensed by us from third parties, as well as processes used in the manufacture of our products, may be successfully challenged, invalidated or circumvented. Additionally, we may not otherwise be able to rely on these patents. In addition, we cannot be sure that competitors, many of whom have substantial resources and have made substantial investments in competing technologies, will not seek to apply for and obtain patents that prevent, limit or interfere with our ability to make, use and sell our products either in the United States or in foreign markets. If any of our patents are successfully challenged, invalidated or circumvented or our rights or ability to manufacture our products were to be proscribed or limited, our ability to continue to manufacture and market our products could be adversely affected, which would likely have a material adverse effect upon our business, financial condition and results of operations.

Competition

The medical device industry in general and the markets for cervical cancer detection in particular, are intensely competitive. If successful in our product development, we will compete with other providers of cervical cancer detection and prevention products.

Current cervical cancer screening systems, primarily the Pap smear and colposcopy, are well established and pervasive. Improvements and new technologies for cervical cancer detection and prevention, such as Thin-Prep from Cytoc Corporation (now Hologic) and HPV testing from Qiagen, have led to other new competitors. In addition, there are other companies attempting to develop products using forms of biophotonic technologies in cervical cancer detection, such as MediSpectra, Inc. (since acquired by Spectrascience, Inc.). MediSpectra was granted a very limited FDA approval in March 2006 to market its device for detection of cervical cancers. The limited approval limits use of the MediSpectra device only after a colposcopy, as an adjunct. We will be required to develop devices that are more accurate, easier to use or less costly to administer to create devices that have a competitive advantage.

In June 2006, the FDA approved the HPV vaccine Gardasil from drug maker Merck & Co., Inc. Gardasil is a prophylactic HPV vaccine, meaning that it is designed to prevent the initial establishment of HPV infections. In worldwide clinical analyses, however, women who were already infected with one or more of the four HPV types targeted by the vaccine were protected from clinical disease caused by the remaining HPV types in the vaccine. For maximum efficacy, it is recommended that girls receive the vaccine prior to becoming sexually active. Since Gardasil will not block infection with all of the HPV types that can cause cervical cancer, the vaccine should not be considered a substitute for routine Pap smears. On October 16, 2009, GlaxoSmithKline PLC was granted approval in the United States for a similar preventive HPV vaccine, known as Cervarix.

Government Regulation

All of our products are, or will be, regulated as medical devices. Medical device products are subject to rigorous FDA and other governmental agency regulations in the United States and may be subject to regulations of relevant foreign agencies. Noncompliance with applicable requirements can result in import detentions, fines, civil penalties, injunctions, suspensions or losses of regulatory approvals or clearances, recall or seizure of products, operating

restrictions, denial of export applications, governmental prohibitions on entering into supply contracts, and criminal prosecution. Failure to obtain regulatory approvals or the restriction, suspension or revocation of regulatory approvals or clearances, as well as any other failure to comply with regulatory requirements, would have a material adverse effect on our business, financial condition and results of operations.

The FDA regulates the clinical testing, design manufacture, labeling, packaging, marketing, distribution and record-keeping for these products to ensure that medical products distributed in the United States are safe and effective for their intended uses.

In the United States, medical devices are classified into one of three classes on the basis of the controls deemed necessary by the FDA to reasonably assure the devices' safety and effectiveness. Under FDA regulations, Class I devices are subject to general controls, such as labeling requirements, notification to the FDA before beginning marketing activities and adherence to specified good manufacturing practices. Class II devices are subject to general and special controls, such as performance standards, surveillance after beginning market activities, patient registries, and FDA guidelines. Generally, Class III devices are those which must receive premarket approval from the FDA to ensure their safety and effectiveness. Examples of Class III devices include life-sustaining, life-supporting and implantable devices, as well as new devices that have not been found substantially equivalent to legally marketed Class I or II devices.

A medical device manufacturer may seek clearance to market a medical device by filing a 510(k) premarket notification with the FDA if the manufacturer establishes that a newly developed device is substantially equivalent to either a device that was legally marketed before May 28, 1976, the date upon which the Medical Device Amendments of 1976 were enacted, or to a device that is currently legally marketed and has received 510(k) premarket clearance from the FDA. The 510(k) premarket notification must be supported by appropriate information, which may include data from clinical trials to establish the claim of substantial equivalence. Commercial distribution of a device for which a 510(k) premarket notification is required can begin only after the FDA determines the device to be substantially equivalent to a legally marketed device. The FDA has recently been requiring a more rigorous demonstration of substantial equivalence than in the past. It generally takes from three to 12 months from the date of submission to obtain clearance of a 510(k) submission, but it may take substantially longer. The FDA may determine that a proposed device is not substantially equivalent to a legally marketed device, or may require additional information.

An adverse determination or a request for additional information could delay the market introduction of new products that fall into this category, which could have a material adverse effect on our business, financial condition and results of operations. For any of our products that are or will be cleared through the 510(k) process, modifications or enhancements that could significantly affect the safety or effectiveness of the device or that constitute a major change to the intended use of the device will require new 510(k) premarket notification or approval of an application for premarket approval. Any modified device for which a new 510(k) premarket notification is required cannot be distributed until 510(k) clearance is obtained. We may not be able to obtain 510(k) clearance in a timely manner, if at all, for any devices or modifications to devices for which we may submit a 510(k).

A PMA application must be submitted if a proposed device is not substantially equivalent to a legally marketed Class I or Class II device or for specified Class III devices. The application must contain valid scientific evidence to support the safety and effectiveness of the device, which includes the results of clinical trials, all relevant bench tests, and laboratory and animal studies. The application must also contain a complete description of the device and its components, as well as a detailed description of the methods, facilities and controls used for its manufacture, including, where appropriate, the method of sterilization and its assurance. In addition, the application must include proposed labeling, advertising literature and any required training methods. If human clinical trials of a device are required in connection with an application and the device presents a significant risk, the sponsor of the trial is required to file an application for an investigational device exemption before beginning human clinical trials. Usually, the manufacturer or distributor of the device is the sponsor of the trial. The application must be supported by data, typically including the results of animal and laboratory testing, and a description of how the device will be manufactured. If the application is reviewed and approved by the FDA and one or more appropriate institutional review boards, human clinical trials may begin at a specified number of investigational sites with a specified number of patients. If the device presents a non-significant risk to the patient, a sponsor may begin clinical trials after obtaining approval for the study by one or more appropriate institutional review boards, but FDA approval for the commencement of the study is not required. Sponsors of clinical trials are permitted to sell those devices distributed in the course of the study if the compensation received does not exceed the costs of manufacture, research, development and handling. A supplement for an investigational device exemption must be submitted to and approved by the FDA before a sponsor or an investigator may make a significant change to the investigational plan that may affect the plan's scientific soundness or the rights, safety or welfare of human subjects.

Upon receipt of a PMA application, the FDA makes a threshold determination as to whether the application is sufficiently complete to permit a substantive review. If the FDA makes this determination, it will accept the application for filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the application. An FDA review of a PMA application generally takes one to two years from the date the application is accepted for filing. However, this review period is often significantly extended by requests for more information or clarification of information already provided in the submission. During the review period, the submission may be sent to an FDA-selected scientific advisory panel composed of physicians and scientists with expertise in the particular field. The FDA scientific advisory panel issues a recommendation to the FDA that may include conditions for approval. The FDA is not bound by the recommendations of the advisory panel. Toward the end of the PMA application review process, the FDA will conduct an inspection of the manufacturer's facilities to ensure that the facilities are in compliance with applicable good manufacturing practice. If the FDA evaluations of both the PMA application and the manufacturing facilities are favorable, the FDA will issue a letter. This letter usually contains a number of conditions, which must be met in order to secure final approval of the application. When those conditions have been fulfilled to the satisfaction of the FDA, the agency will issue an approval letter authorizing commercial marketing of the device for specified indications and intended uses.

The PMA application review process can be expensive, uncertain and lengthy. A number of devices for which a premarket approval has been sought have never been approved for marketing. The FDA may also determine that

additional clinical trials are necessary, in which case the premarket approval may be significantly delayed while trials are conducted and data is submitted in an amendment to the PMA application. Modifications to the design, labeling or manufacturing process of a device that has received premarket approval may require the FDA to approve supplements or new applications. Supplements to a PMA application often require the submission of additional information of the same type required for an initial premarket approval, to support the proposed change from the product covered by the original application. The FDA generally does not call for an advisory panel review for PMA supplements. If any PMAs are required for our products, we may not be able to meet the FDA's requirements or we may not receive any necessary approvals. Failure to comply with regulatory requirements would have a material adverse effect on our business, financial condition and results of operations.

Regulatory approvals and clearances, if granted, may include significant labeling limitations and limitations on the indicated uses for which the product may be marketed. In addition, to obtain regulatory approvals and clearances, the FDA and some foreign regulatory authorities impose numerous other requirements with which medical device manufacturers must comply. FDA enforcement policy strictly prohibits the marketing of approved medical devices for unapproved uses. Any products we manufacture or distribute under FDA clearances or approvals are subject to pervasive and continuing regulation by the FDA. The FDA also requires us to provide it with information on death and serious injuries alleged to have been associated with the use of our products, as well as any malfunctions that would likely cause or contribute to death or serious injury.

The FDA requires us to register as a medical device manufacturer and list our products. We are also subject to inspections by the FDA and state agencies acting under contract with the FDA to confirm compliance with good manufacturing practice. These regulations require that we manufacture our products and maintain documents in a prescribed manner with respect to manufacturing, testing, quality assurance and quality control activities. The FDA also has promulgated final regulatory changes to these regulations that require, among other things, design controls and maintenance of service records. These changes will increase the cost of complying with good manufacturing practice requirements.

We are also subject to a variety of other controls that affect our business. Labeling and promotional activities are subject to scrutiny by the FDA and, in some instances, by the Federal Trade Commission. The FDA actively enforces regulations prohibiting marketing of products for unapproved users. We are also subject, as are our products, to a variety of state and local laws and regulations in those states and localities where our products are or will be marketed. Any applicable state or local regulations may hinder our ability to market our products in those regions. Manufacturers are also subject to numerous federal, state and local laws relating to matters such as safe working conditions, manufacturing practices, environmental protection, fire hazard control and disposal of hazardous or potentially hazardous substances. We may be required to incur significant costs to comply with these laws and regulations now or in the future. These laws or regulations may have a material adverse effect on our ability to do business.

International sales of our products are subject to the regulatory requirements of each country in which we market our products. The regulatory review process varies from country to country. The European Union has promulgated rules that require medical products to affix the CE mark, an international symbol of adherence to quality assurance standards and compliance with applicable European medical directives. The appropriate ISO certification is one of the CE mark requirements. We maintain ISO 13485:2003 certification, which allows us to issue a CE mark for our non-invasive cervical cancer detection device once development is complete and sell the device in the European Union and other markets. Losing the right to affix the CE mark to our cervical cancer detection device or any future products could have a material adverse effect on our business, financial condition and results of operations.

We will be responsible for obtaining and maintaining regulatory approvals for our products. The inability or failure to comply with the varying regulations or the imposition of new regulations would materially adversely affect our business, financial condition and results of operations.

Employees and Consultants

As of December 31, 2010, we had 22 regular employees and consulting or other contract arrangements with five additional persons to provide services to us on a full- or part-time basis. Of the 27 people employed or engaged by us, 13 are engaged in research and development activities, two are engaged in sales and marketing activities, one is engaged in clinical testing and regulatory affairs, four are engaged in manufacturing and development, and seven are engaged in administration and accounting. No employees are covered by collective bargaining agreements, and we believe we maintain good relations with our employees.

Our ability to operate successfully and manage our potential future growth depends in significant part upon the continued service of key scientific, technical, managerial and finance personnel, and our ability to attract and retain additional highly qualified personnel in these fields. Two of these key employees have an employment contract with us; none are covered by key person or similar insurance. In addition, if we are able to successfully develop and commercialize our products, we likely will need to hire additional scientific, technical, marketing, managerial and finance personnel. We face intense competition for qualified personnel in these areas, many of whom are often subject to competing employment offers. The loss of key personnel or our inability to hire and retain additional qualified

personnel in the future could have a material adverse effect on our business, financial condition and results of operations.

PROPERTIES

In December 2009, we moved our offices, which comprise our administrative, research and development, marketing and production facilities, to 5835 Peachtree Corners East, Suite D, Norcross, Georgia 30092, where we lease approximately 23,000 square feet under a lease that expires in June 2017.

LEGAL PROCEEDINGS

We are subject to claims and legal actions that arise in the ordinary course of business. However, we are not currently subject to any claims or actions that we believe would have a material adverse effect on our financial position or results of operations.

In October 2010, we received a letter from an attorney representing two stockholders (one of whom, Dolores Maloof, is a significant stockholder) (the “Claimants”), asserting claims for breach of contract and fraud in connection with transactions and occurrences in 2005 and 2009. The letter concerns a Warrant Agreement we entered into with the Claimants in August 2005. Pursuant to the Warrant Agreement, if certain initial financing were to be obtained for our wholly owned subsidiary, InterScan (formerly named Guided Therapeutics, Inc.), the Claimants would receive warrants to purchase an aggregate number of shares of InterScan common stock equal to 7.5% of the outstanding InterScan common stock as of the closing of the such InterScan financing. The Warrant Agreement further provides that if, prior to such financing, we were to license or sell our cervical cancer detection technology, we would remit to the Claimants an aggregate of 7.5% of the net proceeds of such license or sale. The Claimants, through their attorney, allege that the warrants are now issuable to them under the terms of the Warrant Agreement. In that regard, the Claimants have alleged that our name change from SpectRx, Inc. to Guided Therapeutics, Inc., which occurred in 2008, coupled with subsequent financings, supports their claim. In the alternative, the Claimants assert that the Warrant Agreement was modified by an agreement with us in 2009, and under such modification they are entitled to warrants to purchase 2.6 million shares of our common stock at a nominal exercise price, a 2% royalty on certain future product sales, and 3% of any proceeds should we be sold. In a letter issued by our attorneys on November 5, 2010, we have responded to the Claimants’ demands, denying the validity of each. Our response states that the closing of a financing of InterScan was a condition precedent under the express terms of the Warrant Agreement to the issuance of the warrants that the Claimants allege are owed them and that such financing has never occurred. Further, we deny that any agreement to modify the Warrant Agreement was ever made as the Claimants assert, and also deny that any wrongdoing was committed in connection with the change of our name. Although no lawsuit has been filed by Claimants, the Claimants have stated an intention to file suit if a settlement cannot be reached. Although we have denied the validity of these claims, there is no guarantee that our defense would succeed if we are sued, and we may be have to pay damages awards or otherwise may enter into settlement arrangements in connection with these claims.

MARKET FOR OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Our common stock is traded on the OTCQB quotation systems under the ticker symbol GTHP. The number of record holders of our common stock at March 4, 2011 was 194.

The high and low sales prices for the calendar years 2010 and 2009, as reported by the OTCQB, are as follows:

	2010				2009			
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
First Quarter	\$ 1.43	\$ 0.72	\$ 0.43	\$ 0.20	\$ 0.43	\$ 0.20	\$ 0.43	\$ 0.20
Second Quarter	\$ 1.04	\$ 0.68	\$ 0.45	\$ 0.24	\$ 0.45	\$ 0.24	\$ 0.45	\$ 0.24
Third Quarter	\$ 0.90	\$ 0.77	\$ 0.38	\$ 0.20	\$ 0.38	\$ 0.20	\$ 0.38	\$ 0.20
Fourth Quarter	\$ 0.89	\$ 0.73	\$ 1.60	\$ 0.32	\$ 1.60	\$ 0.32	\$ 1.60	\$ 0.32

Dividend Policy

We have not paid any dividends since our inception and do not intend to pay any dividends in the foreseeable future.

Securities Authorized for Issuance Under Equity Compensation Plans

All the securities we have provided our employees, directors and consultants have been issued under our stock option plans, which are approved by our stockholders. We have issued common stock to other individuals that are not employees or directors, in lieu of cash payments, that are not part of any plan approved by our stockholders.

Securities authorized for issuance under equity compensation plans:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	5,738,167	\$0.41	2,517,052
Equity compensation plans not approved by security holders	-	-	-
TOTAL	5,738,167	\$0.41	2,517,052

MANAGEMENT DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION
AND RESULTS OF OPERATION

The following discussion should be read in conjunction with our financial statements and notes thereto accompanying this prospectus.

Overview

We are a medical technology company focused on developing innovative medical devices that have the potential to improve healthcare. Our primary focus is the development of our Light Touch cervical cancer detection technology and extension of our cancer detection platform into other cancers, especially lung and esophageal. Our technology, including products in research and development, primarily relates to biophotonics technology for the non-invasive detection of cancers, including cervical cancer.

We are a Delaware corporation, originally incorporated in 1992 under the name “SpectRx, Inc.,” and, on February 22, 2008, changed our name to Guided Therapeutics, Inc. At the same time, we renamed our wholly owned subsidiary, InterScan, which originally had been incorporated as “Guided Therapeutics.”

Since our inception, we have raised capital through the private sale of preferred stock and debt securities, public and private sales of common stock, funding from collaborative arrangements and grants.

Our prospects must be considered in light of the substantial risks, expenses and difficulties encountered by entrants into the medical device industry. This industry is characterized by an increasing number of participants, intense competition and a high failure rate. We have experienced operating losses since our inception and, as of December 31, 2010, we have an accumulated deficit of about \$78.4 million. To date, we have engaged primarily in research and development efforts. We do not have significant experience in manufacturing, marketing or selling our products. Our development efforts may not result in commercially viable products and we may not be successful in introducing our products. Moreover, required regulatory clearances or approvals may not be obtained in a timely manner, or at all. Our products may not ever gain market acceptance and we may not ever generate significant revenues or achieve profitability. The development and commercialization of our products will require substantial development, regulatory, sales and marketing, manufacturing and other expenditures. We expect our operating losses to continue through at least the end of 2011 as we continue to expend substantial resources to introduce our cervical cancer detection product, further the development of our other products, obtain regulatory clearances or approvals, build our marketing, sales, manufacturing and finance organizations and conduct further research and development.

Our product revenues to date have been limited. In 2010 and 2009, the majority of our revenues were from the NCI and Konica Minolta. We expect that the majority of our revenue in 2011 will also be derived from research contract revenue.

Recent Developments

On January 28, 2010, we entered into a new agreement with Konica Minolta for development of LightTouch prototype devices specific to the esophageal cancer detection application. In this agreement, Konica Minolta agreed to pay us an additional approximately \$1.6 million during 2010 for technical, regulatory and clinical development. In addition to the Barrett’s esophagus product, Konica Minolta retains the rights to apply our technology to lung cancer detection. As of December 31, 2010, we had received the total amount of \$1.6 million. On March 28, 2011, we extended this agreement for an additional year, effective May 1, 2011. Under the 2011 extension agreement, we will receive a total of \$1.72 million, with the first three payments of \$450,000 each due on May 1, August 1 and November 1, 2011, and the last payment of \$370,440 due on or before February 1, 2012.

On March 28, 2011, we also extended our exclusive negotiation and development agreement of optimization of our microporation system for manufacturing, regulatory approval, commercialization and clinical utility with Konica Minolta through April 2011. As of December 31, 2010, we had received a total of \$700,000 under this agreement. Under the 2011 extension agreement, we will receive a total of \$750,000, with the first payment of \$500,000 due on or before April 29, 2011 and the final \$250,000 payment due on or before October 29, 2011.

On February 26, 2010, we held a special meeting of stockholders to approve an amendment to our certificate of incorporation to reclassify our series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of Series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. Upon this reclassification, the \$9.1 million in outstanding 2007 Notes and accrued interest were automatically converted into 13,985,197 shares of common stock.

On September 10, 2010, we completed a private placement of 3,771,605 shares of our common stock at a purchase price of \$0.81 per share, pursuant to which we raised approximately \$3 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

We completed enrollment in our FDA pivotal trial in 2008 and on November 18, 2010, the FDA accepted our completed PMA application, effective September 23, 2010, for substantive review. On March 7, 2011, we announced that the FDA had inspected two clinical trial sites as part of its review process and raised no formal compliance issues.

In a letter from the U.S. Treasury Department dated October 29, 2010, we were notified that we were awarded a cash grant of \$244,479 under the federal Qualifying Therapeutic Discovery Project program for 2009. We received the cash on November 30, 2010.

As of March 10, 2011, we have received a total of \$611,362, from the exercise of outstanding warrants to purchase an aggregate of 940,556 shares of our common stock.

Critical Accounting Policies

Our material accounting policies, which we believe are the most critical to an investor's understanding of our financial results and condition, are discussed below. Because we are still early in our enterprise development, the number of these policies requiring explanation is limited. As we begin to generate increased revenue from different sources, we expect that the number of applicable policies and complexity of the judgments required will increase.

Currently, our policies that could require critical management judgment are in the areas of revenue recognition, reserves for accounts receivable and inventory valuation.

Revenue Recognition: We recognize revenue from contracts on a straight line basis, over the terms of the contract. We recognize revenue from grants based on the grant agreement, at the time the expenses are incurred.

Valuation of Deferred Taxes: We account for income taxes in accordance with the liability method. Under the liability method, we recognize deferred assets and liabilities based upon anticipated future tax consequences attributable to differences between financial statement carrying amounts of assets and liabilities and their respective tax bases. We establish a valuation allowance to the extent that it is more likely than not that deferred tax assets will not be utilized against future taxable income.

Valuation of Equity Instruments Granted To Employee, Service Providers and Investors: On the date of issuance, the instruments are recorded at their fair value as determined using the Black-Scholes valuation model. See Note 3 to the consolidated financial statements accompanying this prospectus for the assumptions used in the Black-Scholes valuation.

Allowance for Accounts Receivable: We estimate losses from the inability of our customers to make required payments and periodically review the payment history of each of our customers, as well as their financial condition, and revise our reserves as a result.

Results of Operations

Comparison of 2010 and 2009

General: Net loss attributable to common stockholders decreased to approximately \$4.5 million or \$0.12 per share in 2010, from \$6.4 million or \$0.38 per share in 2009.

Revenue from Grants and other Agreements: Total revenues increased to approximately \$3.3 million in 2010, from \$1.6 million in 2009. During the years ended December 31, 2010 and 2009, we recorded revenue of approximately \$741,000 and \$539,000 from the NCI grant, respectively. In 2010, approximately \$1.4 million of revenue was recorded from Konica Minolta agreements, compared to approximately \$726,000 for the same period in 2009. We also recorded revenue of approximately \$133,000 in 2009 from NIH. There were no costs of sales in 2010 and 2009.

Research and Development Expenses: Research and development expenses increased to approximately \$1.8 million in 2010, compared to approximately \$1.4 million in 2009, due to an increase in expenses related to our cancer detection technology, primarily due to preparation for the production of demonstration devices.

Sales and Marketing Expenses: Sales and marketing expenses increased to approximately \$131,000 in 2010, compared to approximately \$63,000 in 2009, due to an increase in expenses related to our cancer detection technology, primarily due to preparation for the marketing efforts for our devices.

General and Administrative Expense: General and administrative expense increased to about \$3.0 million in 2010, from about \$1.9 million in 2009. The increase is primarily related to an increase in the use of professionals to support our efforts in preparation for the production of demonstration devices.

Other Income: Other income was approximately \$2,000 in 2010 compared to approximately \$32,000 in 2009.

Loss on Extinguishment of Debt: Loss on extinguishment of debt was approximately \$401,000 in 2009. The debt extinguishment relates to a gain from the write off of old payables to a former collaborative partner, dating back to 1999, which was approximately \$381,000 and a loss from the conversion of notes, which was approximately \$782,000. There was no loss on debt extinguishment in 2010.

Interest Expense: Interest expense decreased to approximately \$1.2 million for the year ended December 31, 2010, as compared to expenses of approximately \$3.9 million for the same period in 2009. The significant decrease is primarily due to the February 26, 2010 conversion of indebtedness into common stock, as well as a decrease in interest expense on a lower loan balance for the year ended December 31, 2010.

Liquidity and Capital Resources

We have financed our operations since inception primarily through grants and private sales of debt and private and public sales of our equity securities, as well as agreements with collaborative partners. At December 31, 2010, we had cash of approximately \$3.3 million and working capital of approximately \$612,000.

Our major cash flows in the year ended December 31, 2010, consisted of cash out-flows of \$310,000 from operations, including approximately \$2.8 million of net loss, cash outflow of \$226,000 from investing activities and a net change from financing activities of \$3.5 million, which primarily represents the proceeds received from our convertible notes payable and proceeds from a third party investment in our subsidiary.

On March 12, 2007, we completed a restructuring of our then-existing indebtedness by entering into a loan agreement with existing and new creditors. Pursuant to the loan agreement, our then-existing indebtedness was restructured and consolidated into the 2007 Notes. The aggregate principal amount of the originally issued 2007 Notes was approximately \$4.8 million and was due on March 1, 2010. On February 26, 2010, these 2007 Notes plus accrued interest were converted into common stock (see details below).

On December 1, 2008, we entered into a note purchase agreement with 28 existing and new lenders, pursuant to which we issued approximately \$2.3 million in aggregate principal amount of 2008 notes and warrants exercisable for 11,558,878 shares of common stock. Approximately \$1.3 million of the proceeds from the issuance of the 2008 notes was used to convert existing debt into 2008 notes, including conversion of an unsecured note issued to Dolores Maloof on April 10, 2008 in the aggregate principal amount of \$400,000, plus interest, as well as notes issued under the note purchase agreement, dated between May 23 and July 7, 2008, in aggregate principal amount of \$625,000, plus interest, held by John E. Imhoff and eleven other designated investors. The remaining funds were used in product development, working capital and other corporate purposes.

On August 31, 2009, we issued an aggregate of \$3.6 million in 2007 Notes in exchange for the extinguishment of an equal amount of debt represented by the 2008 notes and the other outstanding notes issued after the 2007 Notes.

In October of 2009, the loan agreement governing the 2007 Notes was further amended to provide for automatic conversion of the 2007 Notes into a number of shares of common stock equal to the outstanding amounts being so converted divided by the then-current conversion price of \$0.65, to be triggered upon a reclassification of our series A convertible preferred stock into common stock and warrants to purchase shares of common stock.

On February 1, 2010, we entered into an agreement with Konica Minolta to co-develop new, non-invasive cancer development products. Pursuant to the agreement, we were paid approximately \$1.6 million as of December 31, 2010, in addition to pre-existing option-to-license payments of approximately \$700,000 already received from Konica Minolta, in exchange for Konica Minolta's right to purchase prototype devices and to rely on us to establish the technical approach and regulatory strategy for potential entry of the new products into the U.S. and international markets. The new products are for the detection of esophageal and lung cancer, and are based on our LightTouch non-invasive cervical cancer detection technology, which will be undergoing the U.S. Food and Drug Administration's premarket approval process. We have received approximately \$3.8 million since 2008 from Konica Minolta pursuant to various co-development agreements similar to the current agreement, as well as no-shop agreements.

On February 26, 2010, we amended our certificate of incorporation to reclassify our series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. Upon this reclassification, the \$9.1 million in outstanding 2007 Notes and accrued interest were automatically converted into 14 million shares of common stock.

On April 27, 2010, we executed an agreement to extend our license agreement with Konica Minolta to co-develop non-invasive cancer detection products for one year. Konica Minolta will pay us a \$750,000 fee for the extension. As of December 31, 2010, we have received \$700,000. Additionally, the agreement provides for a subsequent one-year renewal upon the written agreement of the parties. The original agreement was a one-year exclusive negotiation and development agreement of optimization of our microporation system for manufacturing, regulatory approval, commercialization and clinical utility, which we and Konica Minolta entered into in April 2009. For the year ended December 31, 2009 we were paid \$750,000 under the agreement.

On September 10, 2010, we completed a private placement of 3,771,605 shares of our common stock at a purchase price of \$0.81 per share, pursuant to which we raised approximately \$3 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

We will be required to raise additional funds through public or private financing, additional collaborative relationships or other arrangements in addition to these sources. We believe our existing and available capital resources will be sufficient to satisfy our funding requirements through the fourth quarter of 2011. We are evaluating various options to further reduce our cash requirements to operate at a reduced rate, as well as options to raise additional funds, including loans using certain assets as collateral.

Substantial capital will be required to develop our products, including completing product testing and clinical trials, obtaining all required United States and foreign regulatory approvals and clearances, and commencing and scaling up manufacturing and marketing our products. Any failure to obtain capital would have a material adverse effect on our business, financial condition and results of operations.

Our financial statements have been prepared and presented on a basis assuming we will continue as a going concern. The above factors raise substantial doubt about our ability to continue as a going concern, as more fully discussed in Note 1 to the consolidated financial statements accompanying this prospectus and in the report of our independent registered public accounting firm accompanying our financial statements.

Off-Balance Sheet Arrangements

We have no material off-balance sheet arrangements; no special purpose entities; nor do activities that include non-exchange-traded contracts account for at fair value.

DIRECTORS AND EXECUTIVE OFFICERS

Our executive officers are elected by and serve at the discretion of our board of directors. The following table lists information about our directors and executive officers as of December 31, 2010:

Name	Age	Position with Guided Therapeutics
Mark L. Faupel, Ph.D.	55	Chief Executive Officer, Acting Chief Financial Officer, President and Director
Richard L. Fowler	54	Senior Vice President of Engineering
Shabbir Bambot, Ph.D.	45	Vice President for Research and Development
Ronald W. Allen	69	Director
Ronald W. Hart, Ph.D.	68	Director
John E. Imhoff, M.D.	62	Director
Michael C. James	52	Director
Jonathan M. Niloff, M.D.	56	Director
William E. Zachary, Jr.	68	Chairman and Director

Except as set forth below, all of the executive officers have been associated with us in their present or other capacities for more than the past five years. Officers are elected annually by the board of directors and serve at the discretion of the board. There are no family relationships among any of our executive officers and directors.

Mark L. Faupel, Ph.D. has been a director since 2007 and has more than 25 years of experience in developing non-invasive alternatives to surgical biopsies and blood tests, especially in the area of cancer screening and diagnostics. Dr. Faupel has served as our Chief Executive Officer since May 2007 and prior thereto was our Chief Technical Officer from April 2001 to May 2007. Prior to coming to us in 1998, Dr. Faupel was the co-founder and Vice President of Research and Development at Biofield Corp. His work in early stage cancer detection has won two international awards and he is a former member of the European School of Oncology Task Force. Dr. Faupel serves as a National Institutes of Health reviewer, is the inventor on 15 U.S. patents and has authored numerous scientific publications and presentations, appearing in such peer-reviewed journals as The Lancet. Dr. Faupel earned his Ph.D. in neuroanatomy and physiology from the University of Georgia.

Dr. Faupel's extensive experience in founding and managing point of care cancer detection companies includes the basic scientific applications, clinical trials, regulatory affairs and financing. As such, Dr. Faupel, as CEO, advises the board on all aspects of our business. He is currently, the Acting Chief Financial Officer.

Rick Fowler, Mr. Fowler, Sr. VP of Engineering is an accomplished Executive with significant experience in the management of businesses that sell, market, produce and develop sophisticated medical devices and instrumentation. Mr. Fowler's 25 plus years of experience includes assembling and managing teams, leading businesses and negotiating contracts, conducting litigation, and developing ISO, CE, FDA QSR, GMP and GCP compliant processes and products. He is adept at providing product life cycle management through effective process definition and communication - from requirements gathering, R&D feasibility, product development, product launch, production start up and support. Mr. Fowler combines outstanding analytical, out-of-the-box, and strategic thinking with strong leadership, technical, and communication skills and he excels in dynamic, demanding environments while remaining pragmatic and focused. He is able to deliver high risk projects on time and under budget as well as enhance operational effectiveness through outstanding cross-functional team leadership (R&D, marketing, product development, operations, QA, sales, service, and finance). In addition, Mr. Fowler is well versed in global medical device regulatory and product compliance requirements.

Shabbir Bambot, Ph.D. is a co-founder and serves as our Vice President of Product Development. He has been instrumental in the launch of multiple medical diagnostic products notable among which are the OPTI 2® (AVL/Roche) blood chemistry analyzer and the Bilicheck® (Philips/Respironics) neonatal jaundice monitor. He has been awarded multiple NIH SBIR grants totaling in excess of \$6.0 million for developing and clinical testing of devices for cancer diagnosis and has 8 US patents and several pending patent applications. He has a Ph.D. in Chemical Engineering from the University of Pittsburgh, has published extensively in the life sciences and medical diagnosis arena and has served on NIH study sections as well as review panels for scientific and technical publications. He also has extensive experience with FDA 510K and PMA applications as well as quality systems compliance and ISO 13485 certification.

Ronald W. Allen was named a Director of Guided Therapeutics in September 2008. Mr. Allen retired as Delta Airline Chairman of the Board, President and Chief Executive Officer in July 1997, and had been its chairman of the board and Chief Executive Officer since 1987. He is a Director of The Coca-Cola Company, Aaron Rents, Inc., Aircastle Limited and Interstate Hotels & Resorts, Inc. He also is a board member of the St. Joseph's Translational Research Institute, which endeavors to turn new medical discoveries into tangible cures.

Mr. Allen, as Chairman and CEO of Delta Airlines, pioneered the international expansion of Delta into new markets, much as we are pioneering new technology in the fight against cancer. Mr. Allen has extensive experience serving on many types of boards, both for small and large companies and for medical and non-medical entities. His background in personnel is helpful to the Board as we grow and add new personnel.

Ronald W. Hart, Ph.D. has served as a member of our Board of Directors since March 2007. He has published over 600 peer-reviewed publications, has been appointed to a number of academic positions and is credited with developing the first direct proof that DNA is causal in certain forms of cancer. He chaired a number of federal committees and task forces, including the development and implementation of the Technology Transfer Act of 1986 and the White House Task Force on Chemical Carcinogenesis. In 1980, Dr. Hart was appointed Director of the National Center for Toxicological Research, the research arm of the FDA, a position he held until 1992. In 1992, Dr. Hart was the first ever Presidential Appointee to the position of Distinguished Scientist in Residence for the US Public Health Service/FDA, a position he held until his retirement in 2000. Dr. Hart received his Ph.D. in physiology and biophysics from the University of Illinois. Dr. Hart currently serves on the Boards of Directors of Milto Pharmaceuticals, WaterChef, Inc. and Immunovative, Inc. and since 2002, has helped in the development of business strategy for a number of start-up companies.

Dr. Hart adds considerable value to the Board in at least four critical areas:

- (1) As a former FDA bureau chief, he advises the Board and management on our FDA relationship and strategy.
- (2) As an active participant in the venture community, he advises the Board on financing and other opportunities.
- (3) As an expert in organizational matters, he advises the Board and management regarding company strategy and potential strategic partnerships.
- (4) As an expert in international trade, he advises the Board and management on international partnering and distribution agreements.

John E. Imhoff, M.D. has served as a member of our Board of Directors since April 2006. Dr. Imhoff is an ophthalmic surgeon who specializes in cataract and refractive surgery. He presently serves as a member of the Hawaiian Eye Foundation's Scientific Advisory Board. He is also one of our principal stockholders and invests in many other private and public companies. He has a B.S. in Industrial Engineering from Oklahoma State University, an M.D. from the University of Oklahoma and completed his ophthalmic residency at the Dean A. McGee Eye Institute. He has worked as an ophthalmic surgeon and owner of Imhoff Eye Center since 1983.

Dr. Imhoff has experience in clinical trials and in other technical aspects of a medical device company. His background in industrial engineering is especially helpful to our company, especially as Dr. Imhoff can combine this knowledge with clinical applications. His experience in the investment community also lends itself as invaluable to a public company that participates in equity transactions.

Michael C. James has served as a member of our Board of Directors since March 2007. Mr. James is also the Managing Partner of Kuekenhof Capital Management, LLC, a private investment management company. He also holds the position of Managing Director of Kuekenhof Equity Fund, L.P. and Kuekenhof Partners, L.P. Mr. James currently sits on the Board of Directors of Millennium Biotechnologies Group, Inc. Mr. James was Chief Executive Officer of Nestor, Inc. from January 2009 to September 2009. He was on the Board of Directors of Nestor, Inc. from July 2006 to June 2009. He was employed by Moore Capital Management, Inc., a private investment management company from 1995 to 1999 and held position of Partner. He was employed by Buffalo Partners, L.P., a private investment management company from 1991 to 1994 and held the position of Chief Financial and Administrative Officer. He was employed by National Discount Brokers from 1986 to 1991 and held positions of Treasurer and Chief Financial Officer. He began his career in 1980 as a staff accountant with Eisner LLP. Mr. James received a B.S. degree in Accounting from Farleigh Dickinson University in 1980.

Mr. James has experience both in the areas of company finance and accounting, which is invaluable to us during financial audits and offerings. Mr. James has extensive experience in the management of both small and large companies and his entrepreneurial background is relevant as we develop as a company.

Jonathan M. Niloff, M.D. was elected as a director in April 2010. Dr. Niloff is the Founder, Chairman of the Board and Chief Medical Officer of MedVentive Inc. Prior to joining MedVentive, Dr. Niloff served as President of the Beth Israel Deaconess Physicians Organization, Medical Director for Obstetrics and Gynecology for its Affiliated Physicians Group, and Chief of Gynecology at New England Deaconess Hospital. He served as an Associate Professor of Obstetrics, Gynecology, and Reproductive Biology at Harvard Medical School. He has deep expertise in all aspects of medical cost and quality improvement, and has published extensively on the topic of gynecologic oncology including the development of the CA125 test for ovarian cancer. Dr. Niloff received his undergraduate education at The Johns Hopkins University, an MD degree from McGill University, and an MBA degree from Boston University.

Dr. Niloff is uniquely qualified to assist the Board and management because he combines his clinical background as a Harvard Ob-Gyn with his business acumen developed through an MBA degree and as CEO of MedVenture. Dr. Niloff has specific experience in evaluating new medical technology (e.g., CA125) and its implications to cost containment and reimbursement. Furthermore, Dr. Niloff has numerous professional contacts in the Ob-Gyn community that can aid in our development and marketing of our cervical cancer detection technology.

William E. Zachary, Jr. has served as a member of our Board of Directors since April 1999. Since 1971, Mr. Zachary has been a member with the law firm of Zachary & Segraves, P.A. of Decatur, Georgia, of which he is a founding member. He served on the Investigative Panel of the State Bar of Georgia Disciplinary Board from 1997 to 2000. Mr. Zachary was a founder and was chairman of the Board of Directors of Bank Atlanta from 1986 to 2000, at which time Bank Atlanta merged with Branch Bank & Trust Company. Mr. Zachary is a qualified arbitrator for the American Stock Exchange, served as a qualified arbitrator for the New York Stock Exchange until 2008 and served as an arbitrator for the National Association of Securities Dealers, Inc. until 2005.

As an attorney, Mr. Zachary reviews our contracts and financings, and can advise the Board on legal and procedural issues. Mr. Zachary has experience on other Boards and, as arbitrator for the National Association of Securities Dealers, understands and can advise the Board on many issues important to a publicly held company.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table lists specified compensation we paid during each of the fiscal years ended December 31, 2010 and 2009 to the chief executive officer and our two other most highly compensated executive officers, collectively referred to as the named executive officers, in 2010:

2010 and 2009 Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards \$(1)	Total (\$)
Mark Faupel, Ph.D. President, CEO, Acting CFO and Director	2010	228,000		520,000	748,000
	2009	228,000	-	380,000	608,000
Richard Fowler, Senior Vice President of Engineering	2010	170,000	-	-	170,000
	2009	170,000	-	-	170,000

	2010	175,000			175,000
Shabbir Bambot, Ph.D.					
Vice President of Research and Development	2009	175,000	7,500	-	182,500

(1) See Note 3 to the consolidated financial statements that accompany this prospectus .

Dr. Faupel's 2010 and 2009 compensation consisted of a base salary of \$228,000 and usual and customary company benefits. In 2009, Dr. Faupel received no bonus and 1 million incentive stock options. Incentive stock options granted to employees, officers and directors under the Company's Stock Based Compensation Plan are exercisable for a period of up to 10 years from the date of grant, at an exercise price that is not less than the fair market value of the common stock on the date of the grant. The options vest in three installments. One-third of the options vest equally over a two-year period; one-third vest upon a certain condition that was met as of December 31, 2009; and the remaining one-third vest when a certain condition is achieved. The condition had not been met as of December 31, 2010.

In December 2010, Dr Faupel was issued 100,000 shares of common stock, as a payment for outstanding salary of \$82,000, the value of our common stock on the date of issuance. As at December 31, 2010, Dr. Faupel's remaining deferred salary was approximately \$299,414. On March 22 and May 27, 2010, Dr. Faupel was issued 250,000 options each, to purchase common stock at \$1.33 and \$0.75, respectively, pursuant to his employment agreement.

Dr. Bambot's 2010 compensation consisted of a base salary of \$175,000 and usual and customary company benefits [see similar comment in Faupel's paragraph]. He received \$7,500 in cash bonuses and no stock options in 2009. Incentive stock options granted to employees, officers and directors under the Company's Stock Based Compensation Plan are exercisable for a period of up to 10 years from the date of grant, at an exercise price that is not less than the fair market value of the common stock on the date of the grant. The options vest in three installments. One-third of the options vest equally over a two year period; one-third vest upon a certain condition that was met as of December 31, 2009; and the remaining one-third vest when a certain condition is achieved. The condition had not been met as of December 31, 2010.

As of December 31, 2009, Dr. Bambot's total salary deferred was approximately \$8,319. In 2010, Dr Bambot was issued 10,399 shares of common stock, valued at \$0.80 per share to offset the deferred salary. As of December 31, 2010, no amount was owed to Dr. Bambot.

Mr. Fowler's 2010 and 2009 compensation consisted of a base salary of \$170,000 and usual and customary company benefits. He received no bonus and no stock options in 2010 or 2009.

As of December 31, 2010, Mr. Fowler's total salary deferred was approximately \$76,064.

Outstanding Equity Awards to Officers at December 31, 2010

Name and Principal Position	Number of Securities Underlying Options Exercisable (#)(1)	Option Awards		Equity Incentive Plan Awards: Number of Securities Underlying Un-exercised Options (#)		Option Exercise Price (\$)(2)	Option Expiration Date
		Number of Securities Underlying Options Un-exercisable (#)					
Mark Faupel, Ph.D. President, CEO & Acting CFO	958,778	-		647,222		0.62	05/27/2020
Richard Fowler Senior Vice President of Engineering	336,000	-		-		0.30	11/12/2017
Shabbir Bambot, Ph.D. Vice President of Research & Development	506,667	-		178,333		0.33	12/12/2018

(1) Represents fully vested Options.

(2) Based on all outstanding Options

Outstanding Equity Awards to Directors at December 31, 2010

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Name and Principal Position	Option Awards	
	Option Awards (#)	Exercise Price (\$)
Ronald W. Allen Director	542,522	0.34
Ronald W. Hart, Ph.D. Director	1,043,750	0.14
John E. Imhoff, M.D. Director	22,500	0.98
Michael C. James Director	26,250	0.98
Jonathan Niloff, M.D. Director	11,667	0.75
William E. Zachary, Jr. Chairman & Director	272,000	0.20

The following Board members also serve as consultants to the company:

1. Ronald W. Hart, Ph.D. – Dr. Hart’s consulting services include regulatory and clinical issues, especially with advice for the Company with regard to its application to the FDA.
2. Ronald W. Allen – Mr. Allen advises the company with regard to personnel and financing. As such, he plays an important role in identifying potential funding sources.
3. William E. Zachary, Esq. Mr. Zachary advises the company on legal matters and negotiations. He also serves on the Board’s audit committee.

For the fiscal year ended December 31, 2010, Mr. Michael C. James, retired Certified Public Accountant and Dr. John E. Imhoff were members of the compensation committee. The Company’s compensation committee has reviewed and discussed the Compensation Discussion and Analysis with management and based on the review and discussion, the compensation committee will recommend to the Board of Directors that the Compensation Discussion and Analysis be included in the Company’s proxy statement.

SHARE OWNERSHIP OF DIRECTORS, OFFICERS AND CERTAIN BENEFICIAL OWNERS

The following table lists information regarding the beneficial ownership of our common stock as of March 18, 2011 by (i) each person whom we know to beneficially own more than 5% of the outstanding shares of our common stock (a “5% stockholder”), (ii) each director, (iii) each officer named in the summary compensation table below, and (iv) all directors and executive officers as a group. Unless otherwise indicated, the address of each officer and director is 5835 Peachtree Corners East, Suite D. Norcross, Georgia 30092.

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership (1)	Percent of Class (2)	%
John E. Imhoff (3)	10,786,552	20.38	%
Dolores Maloof (4) 2669 Mercedes Drive Atlanta, GA 30345	5,509,155	10.53	%
The Whittemore Collection, Ltd. / George Landegger (5) 4 International Drive Rye Brook, NY 10573	4,196,075	8.66	%
Richard Blumberg (6) 821 Second Avenue, Suite 2200 Seattle, WA 98116	3,793,767	7.45	%
Michael C. James / Kuekenhof Equity Fund, LLP (7)	3,076,192	6.17	%
Ronald Hart (8)	1,341,685	2.76	%
Mark L. Faupel (9)	1,306,000	2.65	%
Ronald W. Allen (10)	879,376	1.80	%
Shabbir Bambot (11)	614,566	1.26	%
Richard L. Fowler (12)	479,343	*	%
William E. Zachary, Jr. (13)	387,057	*	
Jonathan Niloff (14)	23,334	*	

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All directors and executive officers as a group (9 persons) (15)	18,894,105	32.25	%
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(*) Less than 1%.

(1) Except as otherwise indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock.

- (2) Percentage ownership is based on 48,110,789 shares of common stock outstanding as of March 18, 2011. Beneficial ownership is determined in accordance with the rules of the SEC, based on factors that include voting and investment power with respect to shares. Shares of common stock subject to currently exercisable options, warrants, convertible preferred stock or convertible notes, or any such securities exercisable within 60 days after March 20, 2011, are deemed outstanding for purposes of computing the percentage ownership of the person holding those options, but are not deemed outstanding for purposes of computing the percentage ownership of any other person.
- (3) Consists of 5,980,129 common shares, 4,783,923 warrants to purchase common stock at \$0.65 per share and 22,500 shares subject to stock options. Dr. Imhoff is on the board of directors.
- (4) Consists of 1,281,969 shares of common stock and warrants to purchase 4,227,186 common shares at \$0.65 per share.
- (5) Consists of 3,825,704 shares of common stock and 370,371 warrants to purchase common stock at \$0.65 per share.
- (6) Consists of 995,298 shares of common stock and 2,798,469 warrants to purchase common stock at \$0.65 per share.
- (7) Consists of 1,313,368 shares of common stock and 1,736,574 warrants to purchase common stock at \$0.65 per share, held by Kuekenhof Equity Fund, LP, plus 26,250 shares subject to stock options held by Michael C. James personally. Mr. James is on the Board of Directors.
- (8) Consists of 773,275 shares of common stock, 218,410 warrants to purchase common stock at \$0.65 per share and 350,000 shares subject to stock options held by Hart Management, LLC, Ronald Hart, owner. Dr. Hart is on the Board of Directors.
- (9) Consists of 100,000 shares of common stock and 1,206,000 shares subject to stock options.
- (10) Consists of 94,341 shares of common stock, 242,535 warrants to purchase common shares at \$0.65 per share and 542,500 shares subject to stock options held by Ronald Allen. Mr. Allen is on the Board of Directors.
- (11) Consists of 10,399 shares of common stock and 604,167 shares subject to stock options.
- (12) Consists of 87,223 shares of common stock, 56,120 warrants to purchase common shares at \$0.65 per share and 336,000 shares subject to stock options.
- (13) Consists of 50,493 shares of common stock, 64,564 warrants to purchase common shares at \$0.65 per share and 272,000 shares subject to stock options held by William Zachary. Mr. Zachary is on our Board of Directors.
- (14) Consists of 11,667 shares of common stock, and 11,667 shares subject to stock options held by Jonathan M. Niloff. Dr. Niloff is on the Board of Directors.
- (15) Consists of 8,420,895 shares of common stock, 7,102,126 warrants to purchase common shares at \$0.65 per share and 3,371,084 shares subject to stock options.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

On April 13, 2009, we issued a 15% note to John E. Imhoff, one of our directors, in the amount of \$535,660 and warrants to purchase 2,464,360 shares of our common stock, to replace the notes purchased by Dr. Imhoff that were previously owned by J.E. Funderburke, Robert Johnson, John C. Imhoff and Easy Money (the "Selling Investors"), in the amounts of \$154,403, \$102,470, \$158,787 and \$150,000, respectively, under the same terms and conditions. Thereafter, J.E. Funderburke, Robert Johnson and Easy Money, kept 150,000, 102,400 and 150,000 warrants, respectively, under the same terms and conditions. The note was ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

On April 15, 2009, we issued a 17% unsecured note to John E. Imhoff, one of our directors, in the amount of \$35,000, to replace note purchased by Dr. Imhoff that were previously issued to Dolores Maloof on April 3, 2009 and William Zachary on March 26, 2009, in the amounts of \$25,000 and \$10,000, respectively. The note was ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

Between March and April 2009, we received loans and issued promissory notes to: Ron Allen, a director, for \$10,000; Ronald W. Hart, a director, for a total of \$16,000; John E. Imhoff, a director, for \$35,000 and to Dolores Maloof, an individual, for \$50,000. The interest rate on the notes was 17% and they were due six months from issuance. The notes were ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

In March and April 2008, we issued four short-term unsecured promissory notes to our directors in the amounts of \$10,000 each. The notes were non-interest bearing, matured sixty days from funding and were considered past due. However, subsequent to the third quarter of 2008, these notes were surrendered in exchange for new notes, which were ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

Between April and September 2008, we received loans and issued a promissory note to Dolores Maloof, an individual, for a total of \$512,358. The interest rate on the note was 15% and was due on December 1, 2011. The note was ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

On January 2, 2008, we received a loan and issued a promissory note to Dolores Maloof, an individual, for \$100,000. The interest rate on the promissory note was 13% and was due on April 2, 2008. The note was ultimately converted into shares of common stock on February 26, 2010 (see Note 3 to the consolidated financial statements accompanying this prospectus).

In December 2010, we issued 100,000 shares of common stock to Mark Faupel, our President and CEO, as a payment for outstanding salary of \$82,000, the value of our common stock on the date of issuance, which was exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering.

Based on the definition of independence of the NASDAQ Stock Market, the board has determined that Messrs. Zachary, Allen and James, and Drs. Hart, Niloff and Imhoff are independent directors.

LEGAL MATTERS

Jones Day, Atlanta, Georgia, passed upon the validity of the shares of common stock that may be offered by this prospectus.

EXPERTS

Our consolidated financial statements as of December 31, 2010 and 2009, and for the years then ended have been audited by UHY LLP, an independent registered public accounting firm, as set forth in its report, included in this prospectus. Our financial statements and the related independent registered public accounting firm report thereon have been included herein in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN GET MORE INFORMATION

Available Information

We have filed with the SEC under the Securities Act a registration statement on Form S-1 of which this prospectus forms a part. This prospectus does not contain all of the information contained in the registration statement and its exhibits. We strongly encourage you to read carefully the registration statement and its exhibits.

Any statement made in this prospectus concerning the contents of any contract, agreement or other document is only a summary of the actual contract, agreement or other document. If we have filed any contract, agreement or other document as an exhibit to the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved.

We file annual, quarterly and current reports; proxy statements and other information with the SEC. You may read and copy any of this information at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800- SEC-0330 for information on the operation of the Public Reference Room. The SEC also maintains an Internet website that contains reports, proxy statements and other information regarding issuers, including us, who file electronically with the SEC. The address of that site is <http://www.sec.gov>. The information contained on the SEC's website is expressly not incorporated by reference into this prospectus.

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Annual Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Guided Therapeutics, Inc.
and its Subsidiary

We have audited the accompanying consolidated balance sheets of Guided Therapeutics, Inc. and its subsidiary (the "Company") as of December 31, 2010 and 2009, and the related consolidated statements of operations, changes in Stockholders' equity (deficit) and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

We were not engaged to examine management's assertion about the effectiveness of the Company's internal control over financial reporting as of December 31, 2010 and 2009 included in the accompanying Management's Report on Internal Control over Financial Reporting and, accordingly, we do not express an opinion thereon.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Guided Therapeutics, Inc. and its subsidiary as of December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

As described in Note 1 to the consolidated financial statements, the accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company's recurring losses from operations, accumulated deficit and lack of working capital raise substantial doubt about its ability to continue as a going concern. Management's plans concerning these matters are also discussed in Note 1 to the consolidated financial statements. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ UHY LLP

Atlanta, Georgia

March 30, 2011

GUIDED THERAPEUTICS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2010 AND 2009
(In Thousands Except Per Share Data)

ASSETS	2010	2009
CURRENT ASSETS:		
Cash and cash equivalents	\$3,268	\$230
Accounts receivable, net of allowance for doubtful accounts of \$38 and \$41 at December 31, 2010 and 2009, respectively	85	132
Other current assets	30	48
Total current assets	3,383	410
Property and equipment, net	37	4
Deferred debt issuance costs, net	-	101
Capitalized cost of internally developed software for internal use	299	113
Other assets	200	161
Total noncurrent assets	536	379
TOTAL ASSETS	\$3,919	\$789
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES:		
Loan payable – current portion	\$25	\$74
Notes payable – past due	614	438
Accounts payable	915	1,158
Accrued liabilities	885	831
Deferred revenue	332	250
Dividends payable – Series A	-	1,824
Convertible notes payable, including accrued interest and net of debt discount and unfunded subscriptions of \$1.0 million at December 31, 2009, to former related party debt holders	-	8,189
Total current liabilities	2,771	12,764
Long-term loan payable, less current portion	31	-
TOTAL LIABILITIES	2,802	12,764
COMMITMENTS & CONTINGENCIES (Note 5)		
STOCKHOLDERS' EQUITY (DEFICIT):		
Series A convertible preferred stock, \$.001 par value; 5,000 shares authorized, 0 and 243 shares issued and outstanding as of December 31, 2010 and 2009, respectively (liquidation preference \$5,599 as of December 31, 2009)	-	1,962
Common stock, \$.001 par value; 100,000 shares authorized, 47,299 and 19,961 shares issued and outstanding as of December 31, 2010 and 2009, respectively	47	20
Additional paid-in capital	79,515	61,642
Treasury stock, at cost	(104)	(104)
Accumulated deficit	(78,445)	(75,599)
	1,013	(12,079)

TOTAL GUIDED THERAPEUTICS STOCKHOLDERS' EQUITY (DEFICIT)		
Non-controlling interest	104	104
TOTAL STOCKHOLDERS' EQUITY (DEFICIT)	1,117	(11,975)
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$3,919	\$789

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

GUIDED THERAPEUTICS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009
(In Thousands Except Per Share Data)

	2010	2009
REVENUE:		
Contract and grant revenue	\$3,364	\$1,550
COSTS AND EXPENSES:		
Research and development	1,805	1,409
Sales and marketing	131	63
General and administrative	3,049	1,938
Total Costs and Expenses	4,985	3,410
Operating loss	(1,621)	(1,860)
OTHER INCOME	2	32
LOSS FROM EXTINGUISHMENT OF DEBT, net	-	(401)
INTEREST EXPENSE	(1,227)	(3,983)
LOSS BEFORE INCOME TAXES	(2,846)	(6,212)
PROVISION FOR INCOME TAXES	-	-
NET LOSS	(2,846)	(6,212)
PREFERRED STOCK DIVIDENDS	(1,700)	(223)
NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS	\$(4,546)	\$(6,435)
BASIC AND DILUTED NET (LOSS) PER SHARE ATTRIBUTABLE TO COMMON STOCKHOLDERS	\$(0.12)	\$(0.38)
WEIGHTED AVERAGE SHARES OUTSTANDING	38,596	16,828

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

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GUIDED THERAPEUTICS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY (DEFICIT)
FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009
(In Thousands)

	Preferred Stock		Common Stock		Additional	Treasury	Accumulated	Non	
	Series A	Amount	Shares	Amount	Paid-In	Stock	Deficit	Controlling	TOTAL
	Shares				Capital			Interest	
BALANCE, January 1, 2009	336	\$3,069	15,577	\$16	\$ 58,784	\$(104)	\$ (69,408)	\$ -	\$(7,643)
Dividends on preferred stock	-	-	-	-	(223)	-	-	-	(223)
Conversion of convertible notes into common stock	-	-	1,592	1	1,042	-	-	-	1,043
Conversion of preferred stock into common stock	(93)	(1,107)	2,746	3	1,104	-	-	-	-
Stock-based compensation expense	-	-	-	-	407	-	21	-	428
Warrants issued in modification of debt	-	-	-	-	907	-	-	-	907
Loss on extinguishment of debt owed to related parties	-	-	-	-	(379)	-	-	-	(379)
Net (Loss)	-	-	-	-	-	-	(6,212)	-	(6,212)
Investment in common stock of subsidiary	-	-	-	-	-	-	-	104	104
BALANCE, December 31, 2009	243	\$1,962	19,915	\$20	\$ 61,642	\$(104)	\$ (75,599)	\$ 104	\$(11,975)
Conversion of convertible notes into common stock	-	-	14,528	14	9,319	-	-	-	9,333
Conversion of preferred stock	(243)	(1,962)	8,084	8	3,778	-	-	-	1,824

and									
accrued									
dividends into									
common									
stock									
Issuance of									
common stock	-	-	3,772	4	3,051	-	-	-	3,055
Exercise of									
warrants/options	-	-	899	1	477	-	-	-	478
Conversion of									
accrued									
compensation									
into common									
stock	-	-	101	-	90	-	-	-	90
Stock-based									
compensation									
expense	-	-	-	-	1,158	-	-	-	1,158
Net (Loss)	-	-	-	-	-	-	(2,846)	-	(2,846)
BALANCE,									
December 31,									
2010	-	\$-	47,299	\$47	\$ 79,515	\$(104)	\$ (78,445)	\$ 104	\$1,117

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

GUIDED THERAPEUTICS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009
(In Thousands)

	2010	2009
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$(2,846)	\$(6,212)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Bad debt expense	3	16
Depreciation	7	7
Amortization and accretion of deferred financing costs, notes and warrants	1,095	3,077
Issuance of options and warrants for services and debt	1,158	428
Loss of extinguishment of debt	-	401
Conversion of interest to principal	230	856
Changes in operating assets and liabilities:		
Accounts receivable	47	16
Other current assets	18	(2)
Accounts payable	(243)	(179)
Deferred revenue	82	83
Accrued liabilities	141	89
Other assets	(39)	-
Total adjustments	2,499	4,792
Net cash from (used) in operating activities	(347)	(1,420)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions to capitalized software costs	(186)	90
Deposit paid on long-term assets	-	(110)
Additions to fixed assets	(40)	-
Net cash used in investing activities	(226)	(200)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock	3,055	-
Proceeds from issuance of convertible notes payable to former debt holders - related parties	101	1,370
Proceeds from third party investment in subsidiary	-	104
Proceeds from subscription receivable	-	335
Payments made on notes payable	(23)	(27)
Proceeds from options exercised	478	-
Net cash provided by financing activities	3,574	1,782
NET CHANGE IN CASH AND CASH EQUIVALENTS	3,038	162
CASH AND CASH EQUIVALENTS, beginning of year	230	68
CASH AND CASH EQUIVALENTS, end of period	\$3,268	\$230

SUPPLEMENTAL SCHEDULE OF:

Cash paid for:

Interest	\$253	\$1,233
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NONCASH INVESTING AND FINANCING ACTIVITIES:

Conversion of preferred stock into common stock	\$1,962	\$1,104
Dividends payable in the form of preferred stock converted into common stock	\$1,824	\$-
Conversion of bridge notes payable into common stock	\$9,333	\$1,075
Conversion of 2008 convertible notes and 2009 bridge loans to 2007 convertible notes	\$-	\$4,027
Conversion of accrued compensation to debt	\$90	\$-
Dividends in the form of preferred stock and redeemable convertible preferred stock	\$-	\$223
Disposal of property and equipment	\$-	\$32
Deemed dividends in the form of warrants.	\$1,700	\$-

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

GUIDED THERAPEUTICS, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2010 AND 2009

1. Organization, Background, and Basis of Presentation

Guided Therapeutics, Inc. (formerly SpectRx, Inc.), together with its wholly owned subsidiary, InterScan, Inc. (formerly Guided Therapeutics, Inc.), collectively referred to herein as the “Company”, is a medical technology company developing and providing products for the non-invasive cervical cancer detection markets in the United States and internationally. The Company uses its technologies to develop non-invasive diagnostic devices such as its cervical cancer detection product. The Company’s products in development are based upon its proprietary biophotonic technologies.

Basis of Presentation

All information and footnote disclosures included in financial statements have been prepared in accordance with accounting principles generally accepted in the United States.

The Company’s prospects must be considered in light of the substantial risks, expenses and difficulties encountered by entrants into the medical device industry. This industry is characterized by an increasing number of participants, intense competition and a high failure rate. The Company has experienced net losses since its inception and, as of December 31, 2010, it had an accumulated deficit of approximately \$78.4 million. Through December 31, 2010, the Company has devoted substantial resources to research and development efforts. The Company first generated revenue from product sales in 1998, but does not have significant experience in manufacturing, marketing or selling its products. The Company’s development efforts may not result in commercially viable products and it may not be successful in introducing its products. Moreover, required regulatory clearances or approvals may not be obtained. The Company’s products may not ever gain market acceptance and the Company may not ever achieve levels of revenue to sustain further development costs and support ongoing operations or achieve profitability. The development and commercialization of the Company’s products will require substantial development, regulatory, sales and marketing, manufacturing and other expenditures. The Company expects operating losses to continue through the foreseeable future as it continues to expend substantial resources to complete development of its products, obtain regulatory clearances or approvals and conduct further research and development.

Going Concern

The Company’s financial statements have been prepared and presented on a basis assuming it will continue as a going concern. The factors below raise substantial doubt about the Company’s ability to continue as a going concern. The financial statements do not include any adjustments that might be necessary from the outcome of this uncertainty. Notwithstanding the foregoing, the Company believes it has made progress in stabilizing its financial situation by execution of multiyear contracts from Konica Minolta and grants from the National Cancer Institute (“NCI”), while at the same time simplifying its capital structure and significantly reducing debt.

At December 31, 2010, the Company’s current assets exceeded current liabilities by approximately \$612,000 and it had stockholders equity of approximately \$1.0 million, primarily due to the conversion of the convertible notes to common shares in the amount of \$9.3 million along with the proceeds from the September 2010 private placement of

\$3.0 million.

As of December 31, 2010, the Company was past due on payments due under its notes payable in the amount of approximately \$614,000. These notes are unsecured and management is working on a payment arrangement with the holders. As at March 10, 2011, two of the four notes have been renegotiated and are now current.

During 2009, the Company issued short-term bridge notes to fund operations. On August 31, 2009, the Company converted all of these notes and an additional \$1.3 million raised from new notes in 2009 into 2007 Notes (see Note 7), which were subject to automatic conversion into shares of common stock upon the reclassification of the series A convertible preferred stock into common stock and warrants to purchase common stock.

On February 26, 2010, the Company held a special meeting where the stockholders approved the amendment to the Company's certificate of incorporation to reclassify the series A convertible preferred stock into common stock and warrants to purchase shares of common stock, and therefore the 2007 Notes were converted into an aggregate of 13,985,197 shares of common stock (see Note 7).

On September 10, 2010, the Company completed a private placement of 3,771,605 shares of common stock at a purchase price of \$0.81 per share, pursuant to which it raised approximately \$3.1 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

In a letter from the U.S. Treasury Department dated October 29, 2010, the Company was notified that it was awarded a cash grant of \$244,479 under the federal Qualifying Therapeutic Discovery Project program for 2009. This amount was received in the fourth quarter of 2010.

The Company's capital-raising efforts are ongoing. If sufficient capital cannot be raised during the fourth quarter of 2011, the Company has plans to curtail operations by reducing discretionary spending and staffing levels, and attempting to operate by only pursuing activities for which it has external financial support, such as under the Konica Minolta development agreement (see below) and additional NCI or other grant funding. However, there can be no assurance that such external financial support will be sufficient to maintain even limited operations or that the Company will be able to raise additional funds on acceptable terms, or at all. In such a case, the Company might be required to enter into unfavorable agreements or, if that is not possible, be unable to continue operations, and to the extent practicable, liquidate and/or file for bankruptcy protection.

The Company anticipates receiving approximately \$2.5 million from Konica Minolta in 2011, as well as additional federal grants, which could bring in an additional \$750,000. It also has 28.9 million warrants to purchase shares of its common stock outstanding with exercise prices of \$0.65 per share. So far in 2011, warrant exercises have generated approximately \$179,000 and would generate a total of approximately \$18.8 million in cash, assuming full exercise. Management intends to obtain additional funds through debt or equity financings and collaborative partnerships. Management believes that such financing, along with funds from government contracts and grants, including matching-grant funding, if available, and other strategic partnerships will be sufficient to support planned operations through the fourth quarter of 2011. Assuming we receive FDA approval for our Light Touch cervical cancer detection device in 2011, the Company currently anticipates a late 2011 or early 2012 product launch.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant areas where estimates are used include the allowance for doubtful accounts, inventory valuation and input variables for Black-Scholes calculations.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Guided Therapeutics and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated.

Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be a cash equivalent.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is computed using the straight-line method over estimated useful lives of three to seven years. Depreciation expense is included in general and administrative expense

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on the statement of operations. Expenditures for repairs and maintenance are expensed as incurred. Property and equipment are summarized as follows at December 31, 2010 and 2009 (in thousands):

	Year Ended December 31,	
	2010	2009
Equipment	\$1,426	\$1,402
Furniture and fixtures	500	483
	1,926	1,885
Less accumulated depreciation	(1,889)	(1,881)
Total	\$37	\$4

Patent Costs (Principally Legal Fees)

Costs incurred in filing, prosecuting, and maintaining patents are expensed as incurred. Such costs aggregated approximately \$41,000 and \$27,000 in 2010 and 2009, respectively.

Accounts Receivable

The majority of the Company's receivables in 2010 and 2009 were from NCI. The Company performs periodic credit evaluations of its customer's financial condition and generally does not require collateral. The Company reviews all outstanding accounts receivable for collectability on a quarterly basis. An allowance for doubtful accounts is recorded for any amounts deemed uncollectable. The Company does not accrue interest receivable on past due accounts receivables.

Capitalized Costs of Internally Developed Software

Costs of internally developed software are capitalized during the development stage of the software. The cost will be transferred to property and equipment and will be depreciated over the expected life of the software which is estimated to be three years once the software becomes functional. At this time none of the software is functional and there has not been any depreciation recognized in association with the software.

The Company capitalized software costs of \$186,000 and \$90,000 for the years ended December 31, 2010 and 2009, respectively.

Accrued Liabilities

Accrued liabilities are summarized as follows at December 31, 2010 and 2009 (in thousands):

	As of December 31,	
	2010	2009
Accrued compensation	\$632	\$633
Accrued professional fees	143	144
Accrued rent	36	12
Other accrued expenses	74	42
Total	\$885	\$831

Revenue Recognition

The Company recognizes revenue from contracts on a straight line basis, over the terms of the contract. The Company recognizes revenue from grants based on the grant agreement, at the time the expenses are incurred.

In 2010 and 2009, the majority of the Company's revenues were from the Konica Minolta and NCI.

Research and Development

Research and development expenses consist of expenditures for research conducted by the Company and payments made under contracts with consultants or other outside parties and costs associated with internal and contracted clinical trials. All research and development costs are expensed as incurred.

Income Taxes

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities

and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Management provides valuation allowances against the deferred tax assets for amounts that are not considered more likely than not to be realized.

Uncertain Tax Positions

Effective January 1, 2007 the Company adopted ASC guidance regarding accounting for uncertainty in income taxes. This guidance clarifies the accounting for income taxes by prescribing the minimum recognition threshold an income tax position is required to meet before being recognized in the financial statements and applies to all income tax positions. Each income tax position is assessed using a two step process. A determination is first made as to whether it is more likely than not that the income tax position will be sustained, based upon technical merits, upon examination by the taxing authorities. If the income tax position is expected to meet the more likely than not criteria, the benefit recorded in the financial statements equals the largest amount that is greater than 50% likely to be realized upon its ultimate settlement. At December 31, 2010, there were no uncertain tax positions that require accrual.

The Company is current with its federal and applicable state tax returns filings. Although we have been experiencing recurring losses, we are obligated to file tax returns for compliance with Internal Revenue Service (“IRS”) regulations and that of applicable state jurisdictions. As of December 31, 2010, the Company has approximately \$62 million of net operating loss eligible to be carried forward for tax purposes at federal and applicable states level.

None of the Company’s federal or state income tax returns are currently under examination by the IRS or state authorities. However, fiscal years 2007 and later remain subject to examination by the IRS and respective states.

Stock Based Compensation

The Company records compensation expense related to options granted to non-employees based on the fair value of the award.

Compensation cost is recorded as earned for all unvested stock options outstanding at the beginning of the first year based upon the grant date fair value estimates, and for compensation cost for all share-based payments granted or modified subsequently based on fair value estimates.

For the years ended December 31, 2010 and 2009, share-based compensation for options attributable to employees and officers were approximately \$850,000 and \$160,000, respectively. These amounts have been included in the Company’s statements of operations. Compensation costs for stock options which vest over time are recognized over the vesting period. As of December 31, 2010, the Company had approximately \$48,000 of unrecognized compensation cost related to granted stock options to be recognized over the remaining vesting period of approximately four years.

3. Stockholders’ Equity (Deficit)

Common Stock

The Company has authorized 100 million shares of common stock with \$0.001 par value, 47,299,617 of which were issued and outstanding as of December 31, 2010.

On September 10, 2010, the Company completed a private placement of 3,771,605 shares of common stock at a purchase price of \$0.81 per share, pursuant to which the Company raised approximately \$3.1 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

Preferred Stock

The Company has authorized 5,000,000 shares of preferred stock with a \$.001 par value, none of which were issued or outstanding as of December 31, 2010. The board of directors has the authority to issue these shares and to set dividends, voting and conversion rights, redemption provisions, liquidation preferences, and other rights and restrictions.

Redeemable Convertible Preferred Stock

The board of directors designated 525,000 shares of the preferred stock as redeemable convertible preferred stock, none of which remain outstanding.

Series A Convertible Preferred Stock

In 2004, the board of directors designated 242,576 shares of the preferred stock as series A convertible preferred stock. On February 26, 2010, the Company's certificate of incorporation was amended to reclassify the series A convertible preferred stock into common stock and warrants to purchase shares of common stock, and therefore all of the then-outstanding 242,576 shares of series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock.

On the date of issuance, the warrants were recorded at their fair value as determined using the Black-Scholes valuation model. The Company issued the warrants for the purpose of inducing conversion, or "reclassification," of the series A preferred stock into common stock. The consideration expense associated with the warrants was treated as a preferred dividend. The dividend, which is the excess of (1) the fair value of all securities and other consideration (the warrants and common stock) transferred by the Company to the holders of the series A preferred stock over (2) the fair value of securities issuable pursuant to the original conversion terms (the common stock), has been subtracted from net income to arrive at net income available to common stockholders in the calculation of earnings per share in the first quarter of 2010. Since the series A preferred stockholders received the same number of shares of common stock in the reclassification into which the series A preferred stock were contractually convertible, the excess value was attributed solely to the warrants.

In accordance with the loan agreement governing the then-outstanding outstanding notes first issued in 2007 (the “2007 Notes”), and as a result of the reclassification of the series A preferred stock, on February 26, 2010, the then-outstanding 2007 Notes were converted into 14 million shares of common stock.

The only cash settlements related to the conversion of the 2007 Notes were for fractional shares issued upon conversion.

Stock Options

Under the Company’s 1995 Stock Plan (the “Plan”), a total of 2,517,052 shares remained available at December 31, 2010 and 5,738,167 shares were subject to stock options outstanding as of that date, bringing the total number of shares subject to stock options outstanding and those remaining available for issue to 8,255,219 shares of common stock as of December 31, 2010. The Plan allows the issuance of incentive stock options, nonqualified stock options, and stock purchase rights. The exercise price of options is determined by the Company’s board of directors, but incentive stock options must be granted at an exercise price equal to the fair market value of the Company’s common stock as of the grant date. Options historically granted have generally become exercisable over four years and expire ten years from the date of grant.

The fair value of stock options granted in 2010 and 2009 were estimated using the Black-Scholes option pricing model. A summary of the assumptions used in determining the fair value of options follows:

	2010	2009
Expected volatility	125%	151%
Expected option life in years	10.0	10.0
Expected dividend yield	0.0%	0.0%
Risk-free interest rate	1.50%	2.24%
Weighted average fair value per option at grant date	\$ 0.98	\$ 0.38

Application of the Black-Scholes option pricing model involves assumptions that are judgmental and affect compensation expense. Historical information is the primary basis for the selection of expected volatility, expected option life and expected dividend yield. Expected volatility is based on the most recent historical period equal to the expected life of the option. The risk-free interest rate is based on yields of U.S. Treasury zero-coupon issues with a term equal to the expected life of the option on the date the stock options were granted.

Stock option activity for each of the two years ended December 31 is as follows:

	2010		2009	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	5,480,076	\$0.38	4,306,500	\$0.47
Options granted	632,667	\$1.02	1,222,576	\$0.31
Options exercised	(223,576)	\$0.03	-	-
Options expired/forfeited	(151,000)	\$3.59	(49,000)	\$7.63
Outstanding at end of year	5,738,167	\$0.41	5,480,076	\$0.38
Options vested and exercisable at year-end	4,456,500		3,978,125	\$0.37
Options available for grant at year-end	2,517,052		975,143	

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Aggregate intrinsic value –options exercised	\$ 172,073	\$ -
Aggregate intrinsic value – options outstanding	\$ 2,229,563	\$ 4,492,517
Aggregate intrinsic value – options vested and exercisable	\$ 1,860,362	\$ 2,987,307

The Company estimates the fair value of stock options using a Black-Scholes valuation model. Key input assumptions used to estimate the fair value of stock options include the expected term, expected volatility of the Company's stock, the risk free interest rate, option forfeiture rates, and dividends, if any. The expected term of the options is based upon the historical term until exercise or expiration of all granted options. The expected volatility is derived from the historical volatility of the Company's stock on the OTCQB market for a period that matches the expected term of the option. The risk-free interest rate is the constant maturity rate published by the U.S. Federal Reserve Board that corresponds to the expected term of the option.

In January 2002, the Company assumed the Sterling Medivations 2000 Stock Option Plan, which authorizes the issuance of up to 93,765 shares of the Company's common stock. No options have been exercised under this plan. At December 31, 2010, options exercisable for 6,090 shares were outstanding under this plan.

Warrants

The Company has the following shares of common stock reserved for the warrants outstanding as of December 31, 2010:

Warrants (Underlying Shares)	Exercise Price	Expiration Date
29,167,565(1)	0.65	03/01/2013
151,905(2)	0.005	08/25/2014
377,161(3)	1.01	09/10/2015
29,696,631		

(1) Consists of outstanding warrants issued in connection with various financings, but amended or originally issued on February 26, 2010 to expire on March 1, 2013. Shares underlying these warrants have been registered for resale with the SEC on October 5, 2010. During the year ended December 31, 2010, 665,384 shares of warrants were exercised.

(2) Consists of outstanding warrants issued in conjunction with a consulting agreement dated August 26, 2009.

(3) Consists of outstanding warrants issued in conjunction with a private placement on September 10, 2010.

In connection with certain financing, which became due and payable as of January 30, 2004, and under an agreement dated February 6, 2004, the Company agreed to cause its subsidiary, InterScan, to issue to the lenders party to the agreement, InterScan warrants exercisable for the number of shares of common stock of InterScan equal to 5% of all shares of common stock of InterScan as of and after the issuance of InterScan securities in an InterScan financing, as defined in the agreement. The exercise price per share of common stock of InterScan will equal 5% of the per share purchase price paid by the Purchasers in such InterScan financing. As of December 31, 2009, no such InterScan financing had occurred.

4. Income Taxes

The Company has incurred net operating losses (“NOLs”) since inception. As of December 31, 2010, the Company had NOL carryforwards available through 2029, of approximately \$72.0 million available to offset its future income tax liability. The NOL carryforwards began to expire in 2008. The Company has recorded a valuation allowance for all NOL carryforwards and all deferred tax assets. Utilization of existing NOL carryforwards may be limited in future years based on significant ownership changes. The Company is in the process of analyzing its NOLs and has not determined if it has had any change of control issues that could limit the future use of NOL.

Components of deferred taxes are as follows at December 31 (in thousands):

Deferred tax assets:	2010	2009
Net operating loss carryforwards	\$23,651	\$22,218
Deferred tax liabilities:		
Intangible assets and other	980	924
	24,631	23,142
Valuation allowance	(24,631)	(23,142)
	\$0	\$0

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The following is a summary of the items that caused recorded income taxes to differ from taxes computed using the statutory federal income tax rate for the years ended December 31:

	2010		2009	
Statutory federal tax rate	34	%	34	%
State taxes, net of federal benefit	4		4	
Nondeductible expenses	-		-	
Valuation allowance	(38)	(38)
	0	%	0	%

5. Commitments and Contingencies

Operating Leases

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Future minimum rental payments at December 31, 2010 under non-cancellable operating leases for office space that expires in 2017 and equipment that expires in 2012 are as follows (in thousands):

Year	Amount
2011	\$ 149
2012	\$ 193
2013	\$ 185
2014	\$ 189
2015	\$ 194
2016 and thereafter	\$ 299
Total	\$ 1,209

Rental expense was approximately \$179,000 and \$264,000 in 2010 and 2009, respectively.

Litigation and Claims

In October 2010, the Company received a letter from an attorney representing two stockholders (one of whom, Dolores Maloof, is a significant stockholder) (the “Claimants”), asserting claims for breach of contract and fraud in connection with transactions and occurrences in 2005 and 2009. The letter concerns a Warrant Agreement entered into by the Company and the Claimants in August 2005. Pursuant to the Warrant Agreement, if certain initial financing were to be obtained for the Company’s wholly owned subsidiary, InterScan (formerly named Guided Therapeutics, Inc.), the Claimants would receive warrants to purchase an aggregate number of shares of InterScan common stock equal to 7.5% of the outstanding InterScan common stock as of the closing of the such InterScan financing. The Warrant Agreement further provides that if, prior to such financing, the Company were to license or sell its cervical cancer detection technology, the Company would remit to the Claimants an aggregate of 7.5% of the net proceeds of such license or sale. The Claimants, through their attorney, allege that the warrants are now issuable to them under the terms of the Warrant Agreement. In that regard, the Claimants have alleged that the name change by the Company from SpectRx, Inc. to Guided Therapeutics, Inc., which occurred in 2008, coupled with subsequent financings, supports their claim. In the alternative, the Claimants assert that the Warrant Agreement was modified by an agreement with the Company in 2009, and under such modification they are entitled to warrants to purchase 2.6 million shares of common stock of the Company at a nominal exercise price, a 2% royalty on certain future product sales, and 3% of any proceeds should the Company be sold. The Company in a letter issued by its attorneys on November 5, 2010, has responded to the Claimants’ demands, denying the validity of each. The Company’s response states that the closing of a financing of InterScan was a condition precedent under the express terms of the Warrant Agreement to the issuance of the warrants that the Claimants allege are owed them and that such financing has never occurred. Further, the Company denies that any agreement to modify the Warrant Agreement was ever made as the Claimants assert, and also denies that any wrongdoing was committed in connection with the change of the Company’s name. Although no lawsuit has been filed by Claimants, the Claimants have stated an intention to file suit if a settlement cannot be reached. Although the Company has denied the validity of these claims, there is no guarantee that the Company’s defense would succeed if it is sued, and the Company may be have to pay damages awards or otherwise may enter into settlement arrangements in connection with these claims.

In addition, from time to time, the Company may be involved in various other legal proceedings and claims arising in the ordinary course of business. The disposition of these additional matters, which may occur, individually or in the aggregate, is not expected to have a material adverse effect on the Company’s financial condition. However, depending on the amount and timing of such disposition, an unfavorable resolution of some or all of these matters could materially affect the future results of operations or cash flows in a particular period.

As of December 31, 2010, there was no accrual recorded for any potential losses related to pending litigation.

Contracts

On April 30, 2009, the Company entered into a one year agreement for \$750,000 with Konica Minolta to co-develop non-invasive cancer detection products. The Company received \$500,000 on May 15, 2009 and the remaining balance of \$250,000 was paid on October 29, 2009. The new development agreement follows two years of collaborative preparations to identify large market opportunities that would benefit from the Company's proprietary technology. The new products, for the detection of lung and esophageal cancer, are based on the Company's LightTouch non-invasive cervical cancer detection technology, which is undergoing the FDA's premarket approval process.

On April 28, 2010, the Company entered into a one-year agreement for \$750,000 with Konica Minolta to co-develop non-invasive cancer detection products. The Company received \$500,000 on April 30, 2010, \$200,000 in October 2010 and the remaining balance of \$50,000 is payable in April 2011. The new development agreement follows two years of collaborative preparations to identify large market opportunities that would benefit from the Company's proprietary technology. The new products, for the detection of lung and esophageal cancer, are based on the Company's LightTouch non-invasive cervical cancer detection technology, which is undergoing the FDA's premarket approval process. In addition, on January 28, 2010, the Company executed a new agreement with Konica Minolta for development of LightTouch prototype devices specifically for the esophageal cancer detection application. In this agreement, Konica Minolta has agreed to pay an additional approximately \$1.6 million during 2010 for technical, regulatory and clinical development of prototype devices for esophageal cancer detection. As of December 31, 2010, the Company has been paid in full.

6. License and Technology Agreements

As part of the Company's efforts to conduct research and development activities and to commercialize potential products, the Company, from time to time, enters into agreements with certain organizations and individuals that further those efforts but also obligate the Company to make future minimum payments or to remit royalties ranging from 1% to 3% of revenue from the sale of commercial products developed from the research. The Company generally is required to make minimum royalty payments for the exclusive license to develop certain technology.

7. Notes Payable

On February 26, 2010, the Company held a special meeting of stockholders to approve an amendment to the Company's certificate of incorporation to reclassify the series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. Upon this reclassification, the approximately \$9.1 million in outstanding 2007 Notes was automatically converted into 14.0 million shares of common stock.

Historical Details of the 2007 Convertible Notes

On March 12, 2007, the Company completed a restructuring of its then-existing indebtedness by entering into a loan agreement with existing and new creditors. Pursuant to the loan agreement, the Company's then-existing indebtedness was restructured and consolidated into the 2007 Notes. The aggregate principal amount of the originally issued 2007 Notes was approximately \$4.8 million and was due on March 1, 2010. The originally issued 2007 Notes were convertible into common stock at \$0.65 per share, or 7,285,061 shares of common stock, and were issued with approximately 7.2 million warrants, exercisable immediately at \$0.78 per share for the Company's common stock. Additionally, accrued interest on the 2007 Notes was convertible into shares of the Company's common stock, on the same terms. In addition, the Company issued 661,000 warrants at an exercise price of \$0.78 to the placement agent and others in conjunction with the original issuance of the 2007 Notes, as well as a warrant to purchase 15,000 shares of common stock at \$0.78, as part of interest expense to a non-converting bridge note holder.

Of the proceeds from the original issuance of the 2007 Notes, approximately \$1.9 million was used to convert debt from the previous loans into 2007 Notes, and approximately \$1.2 million was used to retire debt from the previous loans.

The issuance of the 2007 Notes and the warrants changed the conversion price of the Company's series A convertible preferred stock from \$1.50 to \$0.65, the exercise price of certain of the Company's warrants from \$2.25 to \$0.81 and the exercise price of certain of the Company's warrants issued in August 2005 from \$1.50 to \$0.65 (see Note 3). The re-pricing of the series A convertible preferred stock and the associated warrants triggered a deemed dividend in 2007 of approximately \$3.8 million in total. The deemed dividend has no net effect on stockholders' equity.

In March and April 2008, the Company issued four short-term unsecured promissory notes to its directors in the amounts of \$10,000 each. This financing was to provide working capital for the Company. The notes were non-interest bearing, matured sixty days from funding and were considered past due. However, on December 1, 2008 these notes were surrendered in exchange for new convertible notes, and on August 31, 2009, the Company converted all of those notes into 2007 Notes.

On April 10, 2008, the Company issued a new short-term unsecured promissory note to one of the Company's stockholders, Dolores Maloof, in the amount of \$400,000. The note matured on July 10, 2008, with an interest rate of

13%, and contained an obligation to issue a total of 400,000 warrants to purchase shares of the Company's common stock at \$0.65 per share. Under the agreement governing the note, the note was past due; however, on December 1, 2008 the note was surrendered in exchange for a new note, and on August 31, 2009, the Company converted this note into a 2007 Note.

Between May 23 and July 7, 2008, the Company received a total of \$625,000, as part of a new note purchase agreement, effective July 7, 2008. The notes carried 30% warrant coverage at \$0.78. However, subsequent to the third quarter of 2008, these notes were surrendered in exchange for new convertible notes, and on August 31, 2009, the Company converted all of those notes into 2007 Notes.

On December 1, 2008, the Company entered into a note purchase agreement with 29 existing and new lenders pursuant to which the Company issued approximately \$2.3 million in aggregate principal amount of 15% subordinated secured convertible notes due December 1, 2011 and warrants exercisable for 11,558,878 shares of the Company's common stock. Approximately \$1.3 million of the proceeds from this agreement was used to convert existing debt into 2008 notes, including conversion of an unsecured note issued to Dolores Maloof on April 10, 2008 in the aggregate principal amount of \$400,000, plus interest, as well as notes issued under the note purchase agreement, dated between May 23 and July 7, 2008, in aggregate principal amount of \$625,000, plus interest, held by John E. Imhoff and eleven other designated investors. The remaining funds were used in product development, working capital and other corporate purposes. At December 31, 2009, one investor has a subscription agreement totaling \$5,000 outstanding, relating to the December 1, 2008 financing. On August 31, 2009, the Company converted all of the outstanding 2008 notes into 2007 Notes.

On April 13, 2009, the Company issued a 15% note to John E. Imhoff in the amount of \$565,660 to replace the notes purchased by Dr. Imhoff that were previously issued to other investors, in the amounts of \$154,403, \$102,470, \$158,787 and \$150,000, under the same terms and conditions. In connection with Dr. Imhoff's re-purchase of those notes, warrants to purchase 2,464,360 shares of common stock, previously issued to the selling investors, were canceled and a new warrant was issued to Dr. Imhoff. Thereafter, three of the four selling investors kept warrants to purchase 150,000, 102,400 and 150,000 shares of common stock, respectively, under the same terms and conditions. On August 31, 2009, the Company converted Dr. Imhoff's note into a 2007 Note.

On April 15, 2009, the Company issued a 17% unsecured note to John E. Imhoff in the amount of \$35,000 to replace the notes purchased by Dr. Imhoff that were previously issued to Dolores Maloof on April 3, 2009 and William Zachary on March 26, 2009, in the amounts of \$25,000 and \$10,000, respectively, under the same terms and conditions. On August 31, 2009, the Company converted this note into a 2007 Note.

Additionally, the Company issued 17% unsecured notes to the following related parties on the dates indicated (see Note 8):

	Original Loan Amount	Original Loan Date(s)	Original Loan Maturity Date	Loan Status
Ronald W. Hart	\$10,000	04/10/09	10/09/09	Converted to 2007 Note
Dolores Maloof	\$25,000	04/17/09	05/27/09	Converted to 2007 Note
Ronald W. Hart	\$6,000	04/23/09	10/22/09	Converted to 2007 Note
John E. Imhoff	\$65,000	07/07/09	01/06/10	Converted to 2007 Note

On June 19, 2009, the Company issued a 15% unsecured note in the amount of \$10,000 to a new investor. On August 31, 2009, the Company converted this note and all of the outstanding notes described in the table above into 2007 Notes.

On August 31, 2009, giving effect to all of the conversions to 2007 Notes described above, the Company issued an aggregate of \$3.6 million in 2007 Notes in exchange for the extinguishment of an equal amount of debt represented by the exchanged notes. Prior to the August 31, 2009 conversions, there were approximately \$4.6 million in aggregate principal amount of 2007 Notes, for which accrued interest as of August 31, 2009 was approximately \$1.6 million. The Company recorded a loss from the conversion of Notes of approximately \$782,000 in its statements of operations for the year then ended.

In October of 2009, the loan agreement governing the 2007 Notes was further amended to provide for automatic conversion of the 2007 Notes into a number of shares of common stock equal to the outstanding amounts being so converted divided by the then-current conversion price of \$0.65, to be triggered upon a reclassification of the series A convertible preferred stock into common stock and warrants to purchase shares of common stock.

On February 26, 2010, the Company held a special meeting of stockholders to approve an amendment to the Company's certificate of incorporation to reclassify the series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. Upon this reclassification, the \$9.1 million in outstanding 2007 Notes was automatically converted into 14.0 million shares of common stock.

Loan Payable

At December 31, 2009, the Company maintained a line of credit in the amount of \$75,000 with Pacific International Bank of Seattle, Washington. This line was converted to a 36 months straight-line amortizing loan on February 24, 2010, with monthly principal and interest payment of \$2,333 per month. At December 31, 2010, a balance of approximately \$56,000 was outstanding, approximately \$25,000 of which is classified as current loan payable and approximately \$31,000 as long term loan payable.

Notes Payable – Past Due

At December 31, 2010, the Company was past due on four short term notes totaling approximately \$614,000 of principal and accrued interest. On February 7, 2011, the Company was successful in re-negotiating two of the four remaining past due Notes (see Note 11).

8. Related Party Transactions

On April 13, 2009, the Company issued a 15% note to John E. Imhoff in the amount of \$565,660 to replace the notes purchased by Dr. Imhoff that were previously issued to other investors, in the amounts of \$154,403, \$102,470, \$158,787 and \$150,000, under the same terms and conditions. In connection with Dr. Imhoff's purchase of those notes, warrants to purchase 2,464,360 shares of common stock, previously issued to the selling investors, were canceled and a new warrant was issued to Dr. Imhoff. Thereafter, three of the four selling investors kept warrants to purchase 150,000, 102,400 and 150,000 shares of common stock, respectively, under the same terms and conditions. On August 31, 2009, the Company converted Dr. Imhoff's note into a 2007 Note.

On April 15, 2009, the Company issued a 17% unsecured note to John E. Imhoff, in the amount of \$35,000, to replace the notes purchased by Dr. Imhoff that were previously issued to Dolores Maloof on April 3, 2009 and William Zachary on March 26, 2009, in the amounts of \$25,000 and \$10,000, respectively, under the same terms and conditions. On August 31, 2009, the Company converted this note into a 2007 Note.

Additionally, the Company issued 17% unsecured notes to the following persons on the dates indicated:

Noteholder	Original Loan Amount	Original Loan Date(s)	Original Loan Maturity Date	Loan Status
Ronald W. Hart	\$10,000	04/10/09	10/09/09	Converted to 2007 Note
Dolores Maloof	\$25,000	04/17/09	05/27/09	Converted to 2007 Note
Ronald W. Hart	\$6,000	04/23/09	10/22/09	Converted to 2007 Note
John E. Imhoff	\$65,000	07/07/09	01/06/10	Converted to 2007 Note

On August 31, 2009, the Company converted all of these notes into 2007 Notes. On February 26, 2010, the 2007 Notes were automatically converted into 14.0 million shares of common stock (see Note 7).

9. Valuation and Qualifying Accounts

Allowance for Doubtful Accounts

The Company has the following allowances for doubtful accounts (in thousands):

	Year Ended December 31,	
	2010	2009
Beginning balance	\$41	\$25
Additions / (Adjustments)	(3)	16
	\$38	\$41

10. Loss Per Common Share

Basic net loss per share attributable to common stockholders amounts are computed by dividing the net loss plus preferred stock dividends and deemed dividends by the weighted average number of shares outstanding during the period.

11. Subsequent Events

On February 7, 2011, the Board of Directors approved repayment plans for two past due notes totaling approximately \$245,000 (see Note 7).

On February 25, 2011, the Company entered into a three year automobile lease with Southeast Toyota Finance for a 2011 Toyota Camry, for its only expatriate from Konica Minolta. The minimum lease obligation on the Agreement is approximately \$9,317.

As of March 10, 2011, the Company has received a total of \$611,362 from the exercise of outstanding warrants to purchase an aggregate of 940,556 shares of its common stock (See Note 3). The warrants were originally issued pursuant to an exemption from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering, except for the issuances of warrants on February 26, 2010, which were exempt from registration under the Securities Act in reliance upon Section 3(a)(9) of the Securities Act as exchanges with existing securities holders exclusively where no commission or other remuneration was paid or given directly or indirectly for soliciting such exchanges. The cash received upon exercise of the warrants was used for general corporate purposes.

On March 28, 2011, the Company and Konica Minolta entered into a one-year Option and Development Agreement for Collaboration in the Development of Spectroscopic Technology. The effective date of this Agreement is May 1, 2011. The agreement is an extension of a similar 2009 agreement. Under the 2011 agreement, the Company will receive a total of \$750,000. The first payment of \$500,000 is due on or before April 29, 2011 and the final \$250,000 payment is due on or before October 29, 2011.

On March 28, 2011, the Company and Konica Minolta also entered into an Assigned Task Agreement for the Development of Spectroscopy for Barrett's Esophagus. The effective date of this Agreement is May 1, 2011. The agreement is an extension of a similar 2010 agreement. Under the 2011 agreement, the Company will receive a total of \$1.72 million. The payments for this agreement are due as follows: three payments of \$450,000 each, due on May 1, August 1 and November 1, 2011, and a final payment of \$370,440, due on or before February 1, 2012.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. Other Expenses of Issuance and Distribution

The following table sets forth the various expenses and costs incurred or to be incurred by us in connection with the sale of the shares of common stock offered hereby, other than selling commissions, which will be borne by the selling stockholders. All the amounts shown are estimated except the SEC registration fee.

Expense	Dollar Amount
SEC filing fee	\$ 1,872
Legal fees and expenses	10,000
Accounting fees and expenses	10,000
Blue sky and related expenses	5,800
Miscellaneous	500
Total	\$ 28,172

ITEM 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law permits a corporation to include in its charter documents, and in agreements between the corporation and its directors and officers, provisions expanding the scope of indemnification beyond that specifically provided by the current law. Article VII of our certificate of incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law. Article VII of our bylaws provides for the indemnification of officers, directors and third parties acting on our behalf if such person acted in good faith and in a manner reasonably believed to be in and not opposed to our best interest and, with respect to any criminal action or proceeding, if the indemnified party had no reason to believe his conduct was unlawful.

ITEM 15. Recent Sales of Unregistered Securities

On March 12, 2007, we completed a restructuring of our then-existing indebtedness by entering into a loan agreement with existing and new creditors. Pursuant to the loan agreement, our then-existing indebtedness was restructured and consolidated into 13% senior secured convertible notes ("2007 notes"). The aggregate principal amount of the originally issued 2007 notes was approximately \$4.8 million and was due on March 1, 2010. The originally issued 2007 notes were convertible into common stock at \$0.65 per share, or 7,285,061 shares of common stock, and were issued with approximately 7.2 million warrants, exercisable immediately at \$0.78 per share for our common stock. Additionally, accrued interest on the 2007 notes was convertible into shares of common stock, on the same terms. In addition, we issued 661,000 warrants at an exercise price of \$0.78 to the placement agent and others in conjunction with the original issuance of the 2007 notes, as well as a warrant to purchase 15,000 shares of our common stock at \$0.78, as part of interest expense to a non-converting bridge note holder. Of the proceeds from the original issuance of the 2007 notes, approximately \$1.9 million was used to convert debt from previous loans into 2007 notes, and approximately \$1.2 million was used to retire debt from previous loans.

In March and April 2008, we issued four short-term unsecured promissory notes to our directors in the amounts of \$10,000 each. This financing was to provide us working capital. The notes were non-interest bearing, matured sixty days from funding and were considered past due. However, subsequent to the third quarter of 2008, these notes were surrendered in exchange for new convertible notes, and on August 31, 2009, we converted all of those notes into 2007

notes.

On April 10, 2008, we issued a new short-term unsecured promissory note to Dolores Maloof in the amount of \$400,000. The note matured on July 10, 2008, with an interest rate of 13%, and contained an obligation to issue a total of 400,000 warrants to purchase shares of common stock at \$0.65 per share. Under the agreement governing the note, the note was past due; however, subsequent to the third quarter of 2008, the notes was surrendered in exchange for a new note, and on August 31, 2009, we converted this note into a 2007 note.

Between May 23 and July 7, 2008, we received a total of \$625,000, as part of a new note purchase agreement, effective July 7, 2008. The notes carried 30% warrant coverage at \$0.78. However, subsequent to the third quarter of 2008, these notes were surrendered in exchange for new convertible notes, and on August 31, 2009, we converted all of those notes into 2007 notes.

On December 1, 2008, we entered into a note purchase agreement with 29 existing and new lenders pursuant to which we issued approximately \$2.3 million in aggregate principal amount of 15% subordinated secured convertible notes due December 1, 2011 ("2008 notes") and warrants exercisable for 11,558,878 shares of common stock. Approximately \$1.3 million of the proceeds from this agreement was used to convert existing debt into 2008 notes, including conversion of an unsecured note issued to Dolores Maloof on April 10, 2008 in the aggregate principal amount of \$400,000, plus interest, as well as notes issued under the note purchase agreement, dated July 7, 2008, in aggregate principal amount of \$625,000, plus interest, held by John E. Imhoff and eleven other designated investors. The remaining funds were used in product development, working capital and other corporate purposes. On August 31, 2009, we converted all of the outstanding 2008 notes into 2007 notes.

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On April 13, 2009, we issued a 15% note to John E. Imhoff in the amount of \$565,660 to replace the notes purchased by Dr. Imhoff that were previously issued to other investors, in the amounts of \$154,403, \$102,470, \$158,787 and \$150,000, under the same terms and conditions. In connection with Mr. Imhoff's re-purchase of those notes, warrants to purchase 2,464,360 shares of common stock, previously issued to the selling investors, were canceled and a new warrant was issued to Mr. Imhoff. Thereafter, three of the four selling investors kept warrants to purchase 150,000, 102,400 and 150,000 shares of common stock, respectively, under the same terms and conditions. On August 31, 2009, we converted Mr. Imhoff's note into a 2007 note.

On April 15, 2009, we issued a 17% unsecured note to John E. Imhoff in the amount of \$35,000 to replace the notes purchased by Dr. Imhoff that were previously issued to Dolores Maloof on April 3, 2009 and William Zachary on March 26, 2009, in the amounts of \$25,000 and \$10,000, respectively, under the same terms and conditions. On August 31, 2009, we converted this note into a 2007 note.

Additionally, we issued 17% unsecured notes to the following related parties on the dates indicated:

Noteholder	Original Loan Amount	Original Loan Date(s)	Loan Maturity Date	Loan Status
Ronald W. Hart	\$ 10,000	04/10/09	10/09/09	Converted to 2007 Note
Dolores Maloof	\$ 25,000	04/17/09	05/27/09	Converted to 2007 Note
Ronald W. Hart	\$ 6,000	04/23/09	10/22/09	Converted to 2007 Note
John Imhoff	\$ 65,000	07/07/09	01/06/10	Converted to 2007 Note

On June 19, 2009, we issued a 15% unsecured note in the amount of \$10,000 to a new investor. On August 31, 2009, we converted this note and all of the outstanding notes described in the table above into 2007 notes.

On August 31, 2009, giving effect to all of the conversions to 2007 notes described above, we issued an aggregate of \$3.6 million in 2007 notes in exchange for the extinguishment of an equal amount of debt represented by the exchanged notes.

In October of 2009, the loan agreement governing the 2007 notes was further amended to provide for automatic conversion of the 2007 notes into a number of shares of common stock equal to the outstanding amounts being so converted divided by the then-current conversion price of \$0.65, to be triggered upon a reclassification of the series A convertible preferred stock into common stock and warrants to purchase shares of common stock.

On February 26, 2010, the Company held a special meeting of stockholders to approve an amendment to the Company's certificate of incorporation to reclassify the series A convertible preferred stock into common stock and warrants to purchase shares of common stock. As a result, all 242,576 outstanding shares of series A convertible preferred stock and accrued dividends were reclassified into 8,084,139 shares of common stock and warrants to purchase an additional 2,799,327 shares of common stock. The warrants were amended to expire on March 1, 2013 and the price was amended from \$0.78 to \$0.65. Upon this reclassification, the \$9.1 million in outstanding 2007 Notes and accrued interest was automatically converted into 14.0 million shares of common stock.

On September 10, 2010, we completed a private placement of 3,771,605 shares of our common stock at a purchase price of \$0.81 per share, pursuant to which we raised approximately \$3 million. For each share of common stock issued, subscribers received warrants exercisable for the purchase of 1/10 of one share of common stock (in the aggregate, 377,161 shares) at an exercise price of \$1.01 per share. The warrants have a five-year term.

On November 30, 2010, we issued 615,384 shares of our common stock to Opaline International, Inc. in connection with the exercise of warrants. We received \$399,999.60 in proceeds.

The issuances of securities described above, in private placements to a accredited investors, were exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering, except for the issuances of securities on February 26, 2010, described above, which were exempt from registration under the Securities Act in reliance upon Section 3(a)(9) of the Securities Act as exchanges with existing securities holders exclusively where no commission or other remuneration was paid or given directly or indirectly for soliciting such exchanges. The securities described above are restricted securities for the purpose of the Securities Act. Stock certificates representing the securities bear a restrictive legend providing that the securities have not been registered under the Securities Act and cannot be sold or otherwise transferred without an effective registration or an exemption therefrom. Except as otherwise provided above, all cash proceeds from these issuances were used in product development, working capital and other general corporate purposes.

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In 2010, we received approximately \$432,500, from the exercise of outstanding warrants to purchase an aggregate of 665,384 shares of our common stock. See Note 3 to the consolidated financial statements accompanying this prospectus. The warrants were originally issued pursuant to an exemption from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering, except for the issuances of warrants on February 26, 2010, which were exempt from registration under the Securities Act in reliance upon Section 3(a)(9) of the Securities Act as exchanges with existing securities holders exclusively where no commission or other remuneration was paid or given directly or indirectly for soliciting such exchanges. The cash received upon exercise of the warrants was used for general corporate purposes. In December 2010, we issued 100,000 shares of common stock to Mark Faupel, our President and CEO, as a payment for outstanding salary of \$82,000, the value of our common stock on the date of issuance, which was exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering.

ITEM 16. Exhibits

(a)Exhibits

EXHIBIT NO.	DESCRIPTION
3.1	Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q for the period ended June 30, 2010, filed August 12, 2010).
3.2	Bylaws, as amended (incorporated by reference to Exhibit 3.2A to the Annual Report on Form 10-K for the year ended December 31, 2003, filed March 30, 2004).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Amended Registration Statement on Form S-1/A (No. 333-22429), filed April 24, 1997).
4.2	Form of Warrant 2 (incorporated by reference to Exhibit 99.6 to the Current Report on Form 8-K, filed March 29, 2004).
4.3	Warrant Agreement, dated as of August 8, 2005 (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed August 12, 2005).
4.4	Form of Amended and Restated Warrant (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K, filed August 12, 2005).
4.5	Form of Guided Therapeutics Warrant (incorporated by reference to Exhibit 4.3 to the Current Report on Form 8-K, filed August 12, 2005).
4.6	Amended and Restated Loan Agreement by and among SpectRx, Inc., the Agent, and the Noteholders, dated March 1, 2007 (incorporated by reference to Exhibit 4.1 to the Quarterly Report on Form 10-QSB, filed August 24, 2007).
4.7	First Amendment to the Amended and Restated Loan Agreement (incorporated by reference to Exhibit 4.2 to the Quarterly Report on Form 10-QSB, filed August 24, 2007).
4.8	

Amendment to Amended and Restated Loan Agreement (incorporated by reference to Exhibit 4.12 to the Quarterly Report on Form 10-Q for the period ended June 30, 2010, filed August 12, 2010).

- 4.9 Form of Guided Therapeutics 2008 Common Stock Warrant (incorporated by reference to Exhibit 4.9 to the Annual Report on Form 10-K, for the year ended December 31, 2008)
- 4.10 Form of Warrant (incorporated by reference to Annex 1 to the proxy statement on Schedule 14A, filed February 3, 2010).
- 4.11 Form of Warrant Agreement (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K, filed September 14, 2010).
- 5.1** Opinion of Jones Day regarding validity.
- 10.1 1995 Stock Plan and form of Stock Option Agreement thereunder (incorporated by reference to Exhibit 10.2 to the Registration Statement on Form S-1 (No. 333-22429) filed February 27, 1997).
- 10.2 2000 Amendment to the 1995 Stock Plan, as amended (incorporation by reference to Appendix 1 to the Definitive Proxy Statement filed April 24, 2000).
- 10.3 2005 Amendment No. 2 to the 1995 Stock Plan, as amended (incorporated by reference to Appendix 1 to the proxy statement on Schedule 14A, filed May 10, 2005).
- 10.4 Consulting and Severance Agreement between SpectRx, Inc. and Mark A. Samuels, dated May 7, 2007 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K/A, filed June 5, 2007).
- 10.5 Assigned Task Agreement (incorporated by reference to Exhibit 10.17 to the Quarterly Report on Form 10-Q for the period ended March 31, 2010, filed May 13, 2010).
- 10.6 Agreement for Collaboration (incorporated by reference to Exhibit 10.18 to the Quarterly Report on Form 10-Q for the period ended June 30, 2010, filed August 12, 2010).
- 10.7 Form of Subscription Agreement (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed September 14, 2010).
- 21.1 Subsidiaries (incorporated by reference to Exhibit 21.1 to the Registration Statement on Form S-1 (No. 333-169755) filed October 5, 2010).
- 23.1* Consent of UHY LLP.
- 23.2 Consent of Jones Day (included in Exhibit 5.1).
- 24.1 Powers of Attorney (included at signature page of registration statement on Form S-1, filed October 5, 2010).

* Filed herewith.

** Previously filed.

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;
 - (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% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (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;
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) 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) 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 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.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Atlanta, State of Georgia, on March 31, 2011 .

GUIDED THERAPEUTICS, INC.

By: /s/ Mark L. Faupel
 President, Chief Executive Officer and Acting Chief
 Financial Officer

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

DATE	SIGNATURE	TITLE
March 31, 2011	/s/ Mark L. Faupel Mark L. Faupel	President, Chief Executive Officer, Acting Chief Financial Officer and Director (Principal Executive Officer and Principal Financial and Accounting Officer)
	* Ronald W. Hart	Director
	* John E. Imhoff	Director
	* Michael C. James	Director
	* Ronald W. Allen	Director
	* William E. Zachary, Jr.	Chairman and Director
	* Jonathan M. Niloff	Director

* By: /s/ Mark L. Faupel
 Mark L. Faupel
 Attorney-in-Fact

March 31, 2011

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EXHIBIT INDEX

Exhibit Number	Description of Exhibits
23.1	Consent of UHY LLP.

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