SECURITIES & EXCHANGE COMMISSION EDGAR FILING

Form: 10-K

Date Filed: 2011-03-30

Corporate Issuer CIK: 1091596

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

FORM 10-K

(Mark One)

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

For the Fiscal Year Ended December 31, 2010

OR

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

For the Transition Period from _____ to _____.

Commission File Number 001-32518

CYTOMEDIX, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**23-3011702**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

209 Perry Parkway, Suite 7
Gaithersburg, MD 20877

(Address of Principal Executive Offices) (Zip Code)

(240) 499-2680

(Registrant's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Exchange Act: **None**

Securities registered under Section 12(g) of the Exchange Act:

Common Stock, par value $.0001

(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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 definition of "accelerated filer, large accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):
Large Accelerated Filer ☐ Accelerated Filer ☐ Non-accelerated Filer ☐ Smaller Reporting Company ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the voting stock (Common stock) held by non-affiliates of the registrant as of the close of business on June 30, 2010 was approximately $21 million based on the closing sale price of the Common stock on the

NYSE Amex on that date. The registrant does not have any non-voting common equity.

APPLICABLE ONLY TO CORPORATE REGISTRANTS

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date. 47,554,960 shares of Common stock, par value $.0001, outstanding as of March 18, 2011.

DOCUMENTS INCORPORATED BY REFERENCE

None.

CYTOMEDIX, INC.

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FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K (the "Annual Report") (including the section regarding Management's Discussion and Analysis of Financial Condition and Results of Operations) contains certain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, as well as information relating to Cytomedix, Inc. that is based on management's exercise of business judgment and assumptions made by and information currently available to management. Although forward-looking statements in this Annual Report reflect the good faith judgment of management, such statements can only be based on facts and factors currently known by the Company. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. When used in this document and other documents, releases and reports released by the Company, the words "anticipate," "believe," "estimate," "expect," "intend," "the facts suggest" and words of similar import, are intended to identify any forward-looking statements. You should not place undue reliance on these forward-looking statements. These statements reflect the Company's current view of future events and are subject to certain risks and uncertainties as noted in this Annual Report. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results could differ materially from those anticipated in these forward-looking statements. Actual events, transactions and results may materially differ from the anticipated events, transactions or results described in such statements. Although the Company believes that its expectations are based on reasonable assumptions, it can give no assurance that the expectations will materialize. Many factors could cause actual results to differ materially from these forward looking statements including those set forth in Item 1A of this Annual Report. Other unknown, unidentified or unpredictable factors could materially and adversely impact future results. The Company undertakes no obligation and does not intend to update, revise or otherwise publicly release any revisions to its forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of any unanticipated events.

The Company files reports with the Securities and Exchange Commission ("SEC" or "Commission"). It makes available on its website (*www.cytomedix.com*) free of charge its Annual Report, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports as soon as reasonably practicable after electronic filing of such materials with or furnishing of them to the SEC. Information appearing at the Company's website is not a part of this Annual Report. You can also read and copy any materials filed by the Company with the Commission at its Public Reference Room at 100 F Street, NE, Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the Commission at 1-800-SEC-0330. In addition, the Commission maintains an Internet site (*www.sec.gov*) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the Commission, including Cytomedix.

The Company's corporate headquarters are located at 209 Perry Parkway, Suite 7, Gaithersburg, MD 20877. Its phone number is (240) 499-2680. Its fiscal year begins on January 1, and ends on December 31, and any references herein to "Fiscal 2010" mean the year ended December 31, 2010, and references to other "Fiscal" years mean the year ending December 31 of the year indicated.

The Company owns or has rights to various copyrights, trademarks and trade names used in its business. This Annual Report also includes discussions of or references to other trademarks, service marks and trade names of other companies. Other trademarks and trade names appearing in this Annual Report are the property of the holder of such trademarks and trade names.

The Company obtained statistical data, market data and other industry data and forecasts used in this Annual Report from publicly available information. While it believes that the statistical data, industry data, forecasts and market research are reliable, the Company has not independently verified the data, and does not make any representation as to the accuracy of that information.

PART I

ITEM 1. Business

Corporate Overview

Informatix Holdings, Inc. was incorporated in Delaware in 1998. In 1999, Autologous Wound Therapy, Inc. ("AWT"), an Arkansas Corporation, merged with and into Informatix Holdings, Inc. and the name of the surviving corporation was changed to Autologous Wound Therapy, Inc. In 2000, AWT changed its name to Cytomedix, Inc. ("Cytomedix" or the "Company"). In 2001, the Company filed bankruptcy under Chapter 11 of the United States Bankruptcy Code, after which Cytomedix was authorized to continue to conduct its business as debtor and debtor-in-possession. The Company emerged from bankruptcy in 2002 under a Plan of Reorganization. At that time, all of the Company's securities or other claims against or equity interest in the Company were canceled and of no further force or effect. Holders of certain claims or securities were entitled to receive new securities from Cytomedix in exchange for their claims or equity interests prior to bankruptcy. All known and allowed claims and equity interests have been satisfied and resolved as of the filing of this Annual Report. In April 2010, the Company acquired the Angel® Whole Blood Separation System ("Angel®") and ActivAT® Autologous Thrombin Processing Kit ("ActivAT®") from Sorin Group USA, Inc ("Sorin") for $7 million, of which $2 million was paid in cash at the time of closing and $5 million is to be paid over a period of 2.5 years under the terms of a promissory note arising as part of the acquisition. The Company's principal offices are located in Gaithersburg, Maryland.

NYSE Amex Delisting — Quotation on the OTC Bulletin Board

On January 20, 2011, Cytomedix notified the staff of the NYSE Amex (the "Exchange") of its intent to withdraw the request for a hearing, and the Exchange notified the Company that the Company's common stock would cease trading on the Exchange with the open of trading on January 26, 2011. The Company's common stock began being quoted on the OTC Bulletin Board on January 26, 2011 under the new trading symbol of "CMXI".

Financial Information about Segments and Geographic Regions

Cytomedix has only one operating segment. Cytomedix primarily operates in the United States. Operations outside the United States represent less than 10% of the business and are not separately presented in this report. See Item 8, Financial Statements and Supplementary Data.

Our Business

Cytomedix develops, sells, and licenses regenerative biological therapies intended to aid the human body in regenerating/healing itself, to primarily address the areas of wound care and orthopedic surgery. Approximately 90% of our sales are in the United States, where we sell our products through a combination of direct sales representatives and independent sales agents. Combined, we have approximately 20 sales professionals selling throughout the United States. In Europe, we have a network of distributors which cover several major European markets. Until November 2009, we licensed certain of our patents to surgical medical device suppliers in the United States; these license agreements and the revenue streams associated therewith, have since terminated as the underlying patents have expired.

The Angel® Whole Blood Separation System

The Angel® Whole Blood Separation System is designed for single patient use at the point of care, and provides a simple yet flexible means for producing quality platelet rich plasma ("PRP") and platelet poor plasma ("PPP") clinical blood components. The system is easy to set up and maintain. It is capable of processing up to 180 ml of whole blood.

We expect that sales growth of these products will be driven through a combination of strengthened distributor relationships, collaborative agreements, and direct sales. Commercial synergies with AutoloGel™ (described below) will increase sales efficiency and help drive growth. Currently, perfusionists, who operate the heart-lung machine during cardiac and cardiopulmonary bypass surgeries and whose responsibilities include, among others, autologous blood collection and processing, are the primary purchasers of the Angel® technology. Perfusionists are increasingly expanding their clinical reach into areas such as wound management where their

expertise in the management of blood and the oxygenation of tissue has become more valuable with the introduction of new therapeutics such as PRP. We expect to manage sales growth outside of the U.S. through distributor agreements.

The network of European distributors will also allow the Company to build AutoloGel™ sales outside of the U.S. markets. In the long term, we expect new technology applications for Angel® and expansion into other surgical and orthopedic applications will provide future growth opportunities.

The ActivAT® System produces autologous thrombin serum from platelet poor plasma. Thrombin is a blood coagulation factor that can facilitate blood clotting and platelet activation. The use of PPP to produce autologous thrombin avoids the loss of valuable PRP. The system produces 5 to 6 ml of thrombin from 12 ml of PPP in approximately 30 minutes of processing time. ActivAT® is sold as an adjunct to the Angel® System in Europe and Canada.

Integration of the Angel® and ActivAT® product lines began in April 2010. The early priorities of the integration process included customer communication, transition of customer service and support, control of the supply chain, and management of the distribution network. Integration of the product lines and related customer support is progressing consistently with expectations. The Company has seen no net attrition of sales during the transition period thus far. Worldwide Angel® and ActivAT® sales in the fourth quarter of 2010 were up 9% compared with similar revenues in the quarter immediately preceding the acquisition.

Market

Angel® is used primarily in operating rooms, for separation of whole blood into red cells, platelet poor plasma and platelet rich plasma. Angel® was cleared by the FDA in August 2005. We are currently selling primarily to perfusionists and hospitals, who primarily use our products in the cardiovascular, and to a lesser extent orthopedic, surgical markets. In surgical procedures, the PRP can be mixed with bone graft material prior to application. Growth factors released by platelets present in the PRP have been shown to aid in the healing process. We are also pursuing opportunities for the application of Angel® into other markets such as veterinary applications, sports injuries, tissue sealant, and stem cell therapy.

The current estimated market in the U.S. for PRP in surgical applications is estimated to be approximately $50 – $75 million. It is projected to grow at 14% annually over the next several years.

Product Development

We intend to seek additional FDA cleared indications for Angel® in 2011. Specifically, we are currently preparing a 510(k) application to cover a bone marrow aspirate indication, which we expect to file in the second quarter 2011. We are also analyzing data and other information which would support additional indications.

Competitive Position

We believe Angel® has several competitive advantages as compared to competing systems. Specifically it has a high degree of flexibility regarding platelet concentrations, hematocrit levels, and volumes. Furthermore, its output is highly consistent and the touch screen interface provides for ease of use by the clinician. However, a number of our competitors are much larger companies, with established market share and significant resources to expend on sales and marketing efforts. While we only acquired Angel® in the second quarter of 2010, we are encouraged that we experienced no net attrition of sales, and have even experienced modest growth during the transition period.

The ActivAT® Autologous Thrombin Processing Kit ("ActivAT®")

ActivAT® is designed to produce autologous thrombin serum from platelet poor plasma and is sold exclusively in Europe and Canada, where it provides a safe alternative to bovine-derived products. It is generally sold in conjunction with Angel®. It currently represents a very small fraction of our total revenues.

The AutoloGel™ System

Market

The AutoloGel™ System ("AutoloGel™") is a device for the production of PRP gel derived from the patient's own blood. AutoloGel™ is cleared by the Food and Drug Administration ("FDA") for use on a variety of exuding wounds. AutoloGel™ is currently marketed to the chronic wound market. The market for products addressing chronic wounds in the U.S. is estimated to be $2.3 billion annually, with 6 million wounds (primarily diabetic foot ulcers, venous leg ulcers, and pressure ulcers). Of this market, PRP represents only a minute fraction currently.

Within this market, we target submarkets that contain substantial chronic wounds and have established payment pathways for our products. These include government agencies (including the Veterans Administration ("VA"), Department of Defense, Indian Health Services, and others), capitated environments (including Long-Term Acute Care hospitals ("LTAC"), health maintenance organizations, and others), state Medicaid agencies, and commercial third-party payors (e.g. Blue Cross/Blue Shield, Aetna, United Healthcare, etc). The Company believes that LTAC's and VA Medical Centers together represent an approximately $500 million market. There are over 400 individual LTAC facilities in the U.S. accredited by the Joint Commission on the Accreditation of Healthcare Organizations and there are over 900 LTAC healthcare providers in the U.S. according to the American Hospital Association. There are approximately 1,300 VA facilities and it is estimated that the VA, Department of Defense, and Workers Compensation Programs represent nearly 10% of the total national healthcare expenditures. We are also pursuing opportunities for the application of AutoloGel™ into other markets such as hair transplantation and veterinary applications.

Internationally, the estimate of chronic wounds is 18 million annually.

Competitive Position

AutoloGel™ is the only PRP system cleared by the FDA for the management of chronic wounds. We believe the formulation is optimized to increase the benefits when used on chronic wounds. Specifically, it produces a PRP with a physiologically relevant concentration of platelets at 1.3x baseline. All other PRP systems produce platelet concentrates at 3 – 14x baseline. Furthermore, it has a very rapid spin time of approximately 60 seconds and is ideal for use as a point-of-care therapy. AutoloGel™ acts as a biologic healing stimulant to restart non-healing wounds. Non healing ulcers are the most frequent cause of amputation. A randomized controlled study (RCT) with AutoloGel™ demonstrated 81% complete healing in common sized diabetic foot ulcers. Use of AutoloGel™ may therefore help reduce diabetic lower extremity amputations. However, we face a challenging competitive environment.

The chronic wound market is replete with alternative therapies; advanced therapies that directly compete with AutoloGel™, and commodity types of products that have established habitual use patterns and provider contracts to encourage standardized use. Also, several suppliers to the chronic wound market have large market share and significant resources to expend on sales and marketing efforts. We are utilizing a clinical, data driven approach to sales and have seen a growth trend in 2009 and 2010. As such, the uptake of new products, including the AutoloGel™ System, is generally slow, as most new products are met initially with a degree of skepticism. While this represents a challenge in the short-run, the Company believes the effectiveness demonstrated by AutoloGel™ will establish the technology in a permanent role within chronic wound care. We continue to make progress toward this goal. In 2010, we saw the continued support of AutoloGel™ by key opinion leaders and have increased sales over 60% as compared to 2009.

Post-Marketing Surveillance Study

In conjunction with the positive clearance decision from the FDA, the Company agreed to conduct a post-market surveillance program to further analyze the safety profile of bovine thrombin as used in the AutoloGel™ System. The Company has named this program The AutoloGel™ Post-marketing Surveillance ("TAPS"). The TAPS program was initiated in 2008 and committed to analyze data from 300 patients over a three year period. The entire program is estimated to cost between $500,000 and $700,000 in total. The Company began enrolling patients in the TAPS program in late 2009. Through December 2010, the Company had enrolled approximately 115 patients and incurred approximately $280,000 in costs. We have observed no adverse events to date and will be sharing our preliminary findings with the FDA later this year. The

Company expects to publish the data generated from this study and leverage it as a tool in its sales and marketing efforts and its pursuit of Medicare and broad commercial insurance reimbursement.

Product Development

In early 2011, we finalized and began selling our new packaging concept for AutoloGel™. This new design and component enhancements are intended to improve the customer experience, reduce process steps and simplify the preparation of AutoloGel™.

The Company continues to develop the next generation of AutoloGel™. We are working with a bioengineering team in Israel to further refine the AutoloGel™ System. This new system optimizes our technology through changes to the centrifuge and the design of a new separation device that operates in a semi-closed system where the blood will be drawn directly into the device, removing any margin for error and providing for much better management of the waste material. This streamlines the process making the clinical procedure more efficient. Furthermore, these new enhancements provide additional intellectual property opportunities for which patent applications have already been filed on our behalf. Functional prototypes have been completed and tested. The results demonstrate that the new device will be able to produce the clinically proven AutoloGel™ formulation. We have nearly completed validation testing and are moving forward with the final development of this more advanced Platelet Separation System and expect to file a 510(k) application for a wound care indication in the second quarter of 2011. In mid 2010, we withdrew our application for an orthopedic indication for AutoloGel™. With the acquisition of Angel®, which already carries the very same orthopedic application we were seeking, as well as the new AutoloGel™ System's adaptability to the orthopedic environment, there was no need to pursue the 510(k).

Data, Publications, and Presentations

Numerous poster and oral presentations have been or will be featured at recent or upcoming wound care conferences. Some have been prepared by Cytomedix, while others were done by thought leaders in wound care with no affiliation to Cytomedix, except in their capacity as our customers. Additionally, positive results from a prospective study evaluating the AutoloGel™ System to treat advanced, chronic wounds was published in the June 2010 issue of Ostomy Wound Management (OWM) in a peer reviewed article entitled, "Chronic Wounds Treated With a Physiologically Relevant Concentration of Platelet-rich Plasma (PRP) Gel: A Prospective Case Series." The article is available at *http://www.owm. com/content/chronic-wounds-treated-physiologically-relevant-concentration-plateletrich-plasma-gel-prosp.* The authors of this article include, among others, certain Company employees and a former consultant to the Company. The Company did not pay any fees for the conduct of the study or the conclusions of the resulting article. The study concluded that treatment with physiologically relevant concentrations of PRP derived from the AutoloGel™ System "showed the product can be utilized by healthcare providers in various healthcare settings to restart the healing process in complex chronic wounds, even wounds recalcitrant to other treatments, and in patients with advanced age, compromised lab values, and co-morbidities". The study enrolled 49 patients with 65 chronic wounds. The average duration of these wounds before the first treatment with AutoloGel™ was 48 weeks. The AutoloGel™ System produced a favorable clinical response in 97% of the wounds treated, resulting in a mean reduction in wound volume of 62% in less than three weeks of treatment on average.

The 65 chronic wounds mentioned above are part of an on-going wound registry maintained by the Company. Since those first 65 wounds, the Company has gathered data on an additional 220 wounds and is in the process of analyzing those data. It is the Company's intention to continue to support the publishing of results from this ongoing study in peer reviewed journals, as appropriate.

Medicare Reimbursement

In March 2008, the U.S. Centers for Medicare and Medicaid Services ("CMS") re-affirmed its 2003 decision of non-coverage for all PRP gel products, which includes AutoloGel™, stating that the data available was "suggestive but not adequate." Although the submarkets currently targeted by Cytomedix are significant, the Company believes the achievement of the full market potential for AutoloGel™ requires Medicare reimbursement. We believe that recent publications/presentations described above, other published literature, and the data we continue to collect through product evaluations will support our marketing efforts and help build a compelling case for a reconsideration of Medicare Part B reimbursement by CMS. Our efforts to

secure Medicare reimbursement for technologies like AutoloGel™ is founded on the following strategies, developed in consultation with our advisors:

- Compile and publish additional data. Cytomedix has accumulated data on approximately 400 wounds since 2008 and results strongly corroborate the very favorable results published regarding our randomized controlled trial completed in 2005.
- Establish strong support among key advocacy groups. There are numerous advocacy groups and professional societies whose members would benefit by the broad reimbursement of PRP gel. We have had several discussions to properly inform a number of these groups of all the facts around PRP gel, generally, and AutoloGel™, specifically. We believe they recognize the benefits that reimbursement will provide to their constituents and further believe that they may appropriately voice their perspective during the anticipated reconsideration.
- Develop portfolio of other payors who reimburse for AutoloGel™. AutoloGel™ currently enjoys Medicaid reimbursement in Illinois and Minnesota. Additionally, several commercial insurers have reimbursed for AutoloGel™. This broader coverage, along with the growing clinical acceptance resulting from our sales and marketing efforts, and the continued use of AutoloGel™ by other government agencies, will create an environment that makes obtainment of Medicare coverage more likely.
- Demonstrate political interest. In 2009 we obtained letters signed by numerous members of Congress indicating their interest in PRP gel and its potential as an effective treatment of chronic wounds. This is important to counterbalance the lobbying efforts of our competitors who, we believe, have previously lobbied against coverage for AutoloGel™.

Other Developments

In September 2009, we entered into a license and distribution agreement with Millennia Holdings, Inc. (“Millennia”) for the Company’s AutoloGel™ System in Japan. That project continues to progress as Millennia is on track to complete its studies to comply with Japanese regulatory requirements. Thereafter, Millennia plans to sell and distribute Cytomedix’s AutoloGel™ System for the treatment of a variety of chronic wounds, including diabetic wounds. The diabetic population in Japan is estimated to be 22.1 million.

Suppliers

We outsource manufacturing for all of our products. We utilize single suppliers for several products that have a complicated manufacturing process and are critical to the Company — specifically, our Angel® whole blood processing sets and Angel® centrifuge machines. We are in the process of formulating a plan to develop redundant capabilities, but that may not take effect until after 2011. Most of the components of AutoloGel™ are generally readily available on the open market and, therefore, the Company believes that, with one exception, no dependencies exist from its current sourcing practices. The one exception is a reagent, bovine thrombin, available exclusively through King Pharmaceuticals.

Customer Concentration

Cytomedix has approximately 150 customers. In 2010, no single customer accounted for more than 6% of total product sales and the top 10 customers represented approximately 1/3 of total product sales.

Patents, Licenses, and Property Rights

Cytomedix relies on a combination of patents, trademarks, trade secrets, and copyright laws, as well as confidentiality procedures, contractual provisions, and other similar measures, to establish and protect its intellectual property.

Historically, the Company has been party to certain royalty agreements relating to its intellectual property under which it pays certain fees. Currently, only one such agreement is in effect as follows:

- Mr. Charles Worden is entitled to receive a royalty equal to 5% of gross profits on revenues generated from reliance on the Worden Patents (U.S. patents 6,303,112 and 6,524,568), patents covering the formulation of AutoloGel™, subject to a $6,250 minimum payment per month and a

limit of $600,000 during any calendar year. This agreement also provides Mr. Worden with a security interest and lien on the patents as well as a reversionary interest if the Company discontinues substantially all efforts to commercialize the underlying patents.

Patents

Cytomedix's patent strategy, designed to maximize value, seeks to (i) assist the Company in establishing significant market positions for its products, (ii) attract strategic partners for collaborative research, development, marketing, distribution, or other agreements, which could likely include milestone payments to the Company, and (iii) generate revenue streams through licensing agreements.

Cytomedix's current patent portfolio consists of more than 60 domestic and international patents that generally fall into the following families:

- Process, formulation, and methods for utilizing platelet releasates to heal damaged tissue
- Design patents relating to our devices
- Biomarkers for wound healing treatment efficacy
- Peptides with anti-inflammatory properties
- Peptides with angiogenic properties

The above patent families encompass the Company's Angel®, ActivAT®, and AutoloGel™ products, as well as the CT-112 anti-inflammatory peptide, homologous growth factors, wound-healing biomarkers, and several other potential therapies. Cytomedix is continually assessing new opportunities to create or in-license other intellectual property assets. These patents have expiration dates ranging from 2013 to 2027. In 2010, the Company filed several new provisional patent applications covering new inventions or improvements to existing patents.

Government Regulation

Government authorities in the United States, Canada, and the European Union extensively regulate pharmaceutical products, biologics, and medical devices. The Company's products and product candidates are subject to clearance and monitoring by the governing bodies prior to and during the marketing and distribution of product. Regulatory requirements apply to, but are not limited to, research and development, safety and efficacy, clinical studies, manufacture, labeling, distribution, marketing, and the import and export of products. Before a product candidate is approved by the governing bodies for commercial marketing, rigorous preclinical and human clinical testing is conducted to test the safety and effectiveness of the product. If the Company fails to comply with the applicable laws and regulations at any time during the product development process, approval process, or during commercialization, it may become subject to administrative and/or judicial sanctions. These sanctions may include, but are not limited do, refusal to approve pending applications, withdrawals of approvals, clinical holds, warning letters, product recalls, product seizures, total or partial suspension of the Company's operations, injunctions, fines, civil penalties and/or criminal prosecution. Any enforcement action could have a material adverse effect on the Company.

Medical Device Regulation

The Company currently manufactures and distributes the AutoloGel™ and Angel® Whole Blood Separation Systems. As such, these and future products manufactured and/or distributed by the Company may be subject to regulations by the appropriate governing bodies, including but not limited to, the U.S. Food and Drug Administration, Health Canada, and the European Medicines Agency. The Company currently has modest operation and business development initiatives outside of the United States. Each of the governing bodies, noted above, serve a similar function as FDA. As such, the Company and its product are subject to the regulations enforced by the outside governing bodies. These regulations include, but are not limited to, product clearance, documentation requirements, good manufacturing practices and medical device reporting. It should be noted that labeling and promotional activities are also subject to regulation by the Federal Trade Commission, in certain circumstances. Current enforcement policies prohibit the marketing of approved medical devices for unapproved uses. Each governing body reviews the labeling and advertising of medical devices to ensure that unapproved uses are not promoted. Before a new medical device can be introduced to

the market, the manufacturer must obtain clearance or approval, depending upon the device classification. In the United States, medical devices are classified into one of three classes — Class I, II or III. The regulations enforced by FDA and/or the appropriate governing bodies to the medical device(s) provide reasonable assurance that the device is safe and effective. In the U.S., Class I devices are non-critical products that FDA believes can be adequately regulated by "general controls" that include provisions relating to labeling, manufacturer registration, defect notification, records and reports, and current good manufacturing practices ("cGMP") based on FDA's Quality Systems Regulations. Most Class I devices are exempt from pre-market notification and some are also exempt from cGMP requirements. Class II devices are products for which the general controls of Class I devices, by themselves, are not sufficient to assure safety and effectiveness and, therefore, require special controls. Additional special controls for Class II devices include performance standards, post-market surveillance patient registries, and the use of FDA guidelines. Standards may include both design and performance requirements. Class III devices have the most restrictive controls and require pre-market approval by FDA. Generally, Class III devices are limited to life-sustaining, life-supporting or implantable devices. All of the governing bodies of the Company's products have the ability to inspect medical device manufacturers, order recalls of medical devices, seize non-complying medical devices, and to criminally prosecute violators.

Section 510(k) of the Federal Food, Drug and Cosmetic Act requires individuals or companies manufacturing medical devices intended for human use to file a notice with FDA at least ninety days before intending to introduce the device into the market. This notice, commonly referred to as a 510(k), must identify the type of classified device into which the product falls, the class of that type, and a specific product already being marketed or cleared by FDA and to which the product is "substantially equivalent." In some instances, the 510(k) must include data from human clinical studies in order to establish "substantial equivalence." The FDA must agree with the claim of "substantial equivalence" before the device can be marketed. The statutory time frame for clearance of a 510(k) is 90 days, though it often takes longer.

A Class III device does not qualify for the 510(k) process. Class III devices require a pre-market approval ("PMA") application and approval before the product can be marketed and distributed. PMA applications must demonstrate, among other factors, that the device in question is safe and effective. Obtaining a PMA application approval can sometimes take several years depending upon the complexity of the issues involved with the device. The statutory time frame for the review of a PMA by the FDA is 180 days and many devices are reviewed and approved within that time frame or within a few months afterward. Marketing approval based on a PMA is generally a longer process than the 510(k) clearance process that is typically obtained in comparatively less time.

The Company currently markets the AutoloGel™ System Centrifuge II, the AutoloGel™ Wound Dressing Kit, the Angel® Whole Blood Separation system, and certain commercially-available reagents (i.e. calcium chloride, ascorbic acid, ACD-A anticoagulant, and bovine thrombin). Each System's component is a legally-marketed product that has been cleared by FDA and/or the appropriate governing body. The AutoloGel™ System Centrifuge II, when used with the AutoloGel™ Wound Dressing Kit and AutoloGel™ Reagents Kit, are suitable for use on exuding wounds such as leg ulcers, pressure ulcers and diabetic ulcers and for the management of mechanically or surgically-debrided wounds. The Angel® Whole Blood Separation system consists of the Angel® system centrifuge, the Whole Blood Access Kit, the Whole Blood Processing Kit and the ActivAT® Autologous Thrombin Kit. It should be noted, that at the present time, the ActivAT® Autologous Thrombin Kit is marketed and distributed in the European Union and Canada. The Angel® Whole Blood Separation system has been cleared for the separation of whole blood into red cells, platelet poor plasma and platelet rich plasma.

During 2003, the Company made a business decision to undertake a prospective, randomized, blinded, controlled trial for the AutoloGel™ System. The objective of the trial was to demonstrate safety and efficacy to the scientific and reimbursement community, as well as to FDA, of the AutoloGel™ System for use on diabetic foot ulcers. In making this decision, the Company subjected itself to increased FDA oversight and its regulations governing the investigational use of medical devices, codified in 21 C.F.R. Part 812. To this end, the Company submitted an Investigational Device Exemption ("IDE") application to FDA under these rules and obtained approval on March 5, 2004, thus allowing the Company to begin its clinical trial. Once the study was complete and the clinical results analyzed, the Company submitted a 510(k) requesting FDA's clearance

of the AutoloGel™ System in January 2006, as discussed above, under the caption Clinical Trial and FDA Clearance. Clearance was received in September 2007.

In April 2010, the Company acquired the Angel® Whole Blood Separation system from Sorin Group (Italy). The transfer and distribution of the product is an on-going process that is subject to FDA, Health Canada, and European Medicines Agency regulations.

As a specification developer, manufacturer and distributor of medical devices, Cytomedix is subject to and complies with, among other standards and regulations, 21 CFR of the Food, Drug and Cosmetic Act, ISO 13485, and the Medical Device Directive. As a manufacturer and distributor of medical devices, the Company, and in some instances its subcontractors, is required to register its facilities and products manufactured annually with the appropriate governing bodies and certain state agencies. Additionally, the Company is subject to periodic inspections by the governing bodies to assess compliance with cGMP regulations. Facilities may also be subject to inspections by other federal, foreign, state or local agencies. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

Bio-pharmaceutical Product Regulation

The Company's CT-112 product candidate and other bio-pharmaceuticals it may develop are also regulated by FDA. Under the United States regulatory scheme, the development process for new such products can be divided into two distinct phases:

- Preclinical Phase. The preclinical phase involves the discovery, characterization, product formulation and animal testing necessary to prepare an Investigational New Drug application ("IND") for submission to FDA. The IND must be accepted by FDA before the drug can be tested in humans. The review period for an IND submission is 30 days, after which, if no comments are made by FDA, the product candidate can be studied in Phase I clinical trials. Certain preclinical tests must be conducted in compliance with FDA's good laboratory practice regulations and the U.S. Department of Agriculture's Animal Welfare Act.
- Clinical Phase. The clinical phase of development follows a successful IND submission and involves the activities necessary to demonstrate the safety, tolerability, efficacy, and dosage of the drug in humans, as well as, the ability to produce the drug in accordance with cGMP requirements. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study and the parameters to be used in assessing the safety and the efficacy of the drug. Each clinical protocol is submitted to FDA as part of the IND prior to beginning the trial. Each trial is reviewed, approved, and conducted under the auspices of an investigational review board ("IRB") and each trial, with limited exceptions, must include the patient's informed consent. Typically, clinical evaluation involves the following time-consuming and costly three-phase sequential process:

  Phase I. In Phase I clinical trials, typically a small number of healthy individuals (although in some instances individuals with the disease or condition for which an indication is being sought for the drug) are tested with the drug to determine the drug's safety and tolerability and includes biological analyses to determine the availability and metabolism of the active ingredient following administration.

  Phase II. Phase II clinical trials involve administering the drug to individuals who suffer from the target disease or condition to determine the drug's potential efficacy and ideal dose. These clinical trials are well controlled, closely monitored, and conducted in a relatively small number of patients, usually involving no more than several hundred subjects.

  Phase III. Phase III clinical trials are performed after preliminary evidence suggesting effectiveness of a drug has been obtained and safety, tolerability, and an ideal dosing regimen have been established. Phase III clinical trials are intended to gather additional information about effectiveness and safety that is needed to evaluate the overall benefit-risk relationship of the drug and to complete the information needed to provide adequate instructions for the use of the drug. Phase III trials usually include from several hundred to a few thousand subjects.

Throughout the clinical phase, samples of the product made in different batches are tested for stability to establish shelf life constraints. In addition, large-scale production protocols and written standard operating procedures for each aspect of commercial manufacture and testing must be developed. These trials require scale up for manufacture of increasingly larger batches of bulk chemical. These batches require validation analyses to confirm the consistent composition of the product.

Phase I, II, and III testing may not be completed successfully within any specified time period, if at all. The FDA closely monitors the progress of each of the three phases of clinical trials that are conducted under an IND and may, at its discretion, reevaluate, alter, suspend (place on "clinical hold"), or terminate the testing based upon the data accumulated to that point and the agency's assessment of the risk/benefit ratio to the patient. The FDA may suspend or terminate clinical trials at any time for various reasons, including a finding that the subjects or patients are being exposed to an unacceptable health risk. The FDA can also request that additional clinical trials be conducted as a condition to product approval. Additionally, new government requirements may be established that could delay or prevent regulatory approval of products under development. Furthermore, IRBs, which are independent entities constituted to protect human subjects at the institutions in which clinical trials are being conducted, have the authority to suspend clinical trials at their respective institutions at any time for a variety of reasons, including safety issues.

After the successful completion of Phase III clinical trials, the sponsor of the new bio-pharmaceutical submits a Biologics License Application ("BLA") to FDA requesting approval to market the product for one or more indications. A BLA is a comprehensive, multi-volume application that includes, among other things, the results of all preclinical studies and clinical trials, information about the drug's composition and manufacturing, and the sponsor's plans for producing, packaging, and labeling the drug. Under the Pediatric Research Equity Act of 2003, an application also is required to include an assessment, generally based on clinical study data, on the safety and efficacy of drugs for all relevant pediatric populations before the BLA is submitted. The statute provides for waivers or deferrals in certain situations. In most cases, the BLA must be accompanied by a substantial user fee. In return, FDA assigns a goal of 10 months from acceptance of the application to return of a first "complete response," in which FDA may approve the product or request additional information.

The submission of the application is no guarantee that FDA will find it complete and accept it for filing. The FDA reviews all BLA's submitted before it accepts them for filing. It may refuse to file the application and request additional information rather than accept the application for filing, in which case, the application must be resubmitted with the supplemental information. After the application is deemed filed and accepted by FDA, agency staff reviews a BLA to determine, among other things, whether a product is safe and effective for its intended use. The FDA has substantial discretion in the approval process and may disagree with an applicant's interpretation of the data submitted in its BLA. As part of this review, FDA may refer the application to an appropriate advisory committee, typically a panel of physicians, for review, evaluation, and an approval recommendation. The FDA is not bound by the opinion of the advisory committee. Drugs that successfully complete BLA review may be marketed in the United States, subject to all conditions imposed by FDA.

Prior to granting approval, FDA conducts an inspection of the facilities, including outsourced facilities, that will be involved in the manufacture, production, packaging, testing, and control of the drug candidate for cGMP compliance. The FDA will not approve the application unless cGMP compliance is satisfactory. If FDA determines that the marketing application, manufacturing process, or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and will often request additional testing or information. Notwithstanding the submission of any requested additional information, FDA ultimately may decide that the marketing application does not satisfy the regulatory criteria for approval and refuse to approve the application by issuing a "not approvable" letter. The length of FDA's review may range from a few months to many years.

If FDA approves the BLA, the product becomes available for physicians to prescribe in the United States. After approval, the BLA holder is still subject to continuing regulation by FDA, including record keeping requirements, submitting periodic reports to FDA, reporting of any adverse experiences with the product, and

complying with drug sampling and distribution requirements. In addition, the BLA holder is required to maintain and provide updated safety and efficacy information to FDA. The BLA holder is also required to comply with requirements concerning advertising and promotional labeling, including prohibitions against promoting any non-FDA approved or "off-label" indications of products. Failure to comply with those requirements could result in significant enforcement action by FDA, including warning letters, orders to pull the promotional materials, and substantial fines. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval.

Biologics manufacturers and their subcontractors are required to register their facilities and products manufactured annually with FDA and certain state agencies and are subject to periodic unannounced inspections by FDA to assess compliance with cGMP regulations. Facilities may also be subject to inspections by other federal, foreign, state or local agencies. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

In addition, following FDA approval of a product, discovery of problems with a product or the failure to comply with requirements may result in restrictions on a product, manufacturer, or holder of an approved marketing application, including withdrawal or recall of the product from the market or other voluntary or FDA-initiated action that could delay further marketing. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contra-indications. Also, FDA may require post-market testing and surveillance to monitor the product's safety or efficacy, including additional clinical studies, known as Phase IV trials, to evaluate long-term effects.

Other regulatory agencies, including Health Canada and the European Medicines Agency, require preclinical and clinical studies, manufacturing validation, facilities inspection, and post-approval record keeping and reporting similar to U.S. FDA requirements. In some instances, data generated for consideration by the U.S. FDA may be submitted to these agencies for their consideration for approvals in other countries.

Fraud and Abuse Laws

The Company may also be indirectly subject to federal and state physician self-referral laws. Federal physician self-referral legislation (commonly known as the "Stark Law") prohibits, subject to certain exceptions, physician referrals of Medicare and Medicaid patients to an entity providing certain "designated health services" if the physician or an immediate family member has any financial relationship with the entity. A person who engages in a scheme to circumvent the Stark Law's referral prohibition may be fined up to $100,000 for each such arrangement or scheme. The penalties for violating the Stark Law also include civil monetary penalties of up to $15,000 per referral and possible exclusion from federal health care programs such as Medicare and Medicaid. The Stark Law also prohibits the entity receiving the referral from billing any good or service furnished pursuant to an unlawful referral, and any person collecting any amounts in connection with an unlawful referral is obligated to refund such amounts. Various states have corollary laws to the Stark Law, including laws that require physicians to disclose any financial interest they may have with a health care provider to their patients when referring patients to that provider. Both the scope and exception for such laws vary from state to state.

The Company may also be subject to federal and state anti-kickback laws. Section 1128B (b) of the Social Security Act, commonly referred to as the Anti-Kickback Law, prohibits persons from knowingly and willfully soliciting, receiving, offering or providing remuneration, directly or indirectly, to induce either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal health care program such as Medicare and Medicaid. The Anti-Kickback Law is broad, and it prohibits many arrangements and practices that are otherwise lawful in businesses outside of the health care industry. The U.S. Department of Health and Human Services ("DHHS") has issued regulations, commonly known as safe harbors that set forth certain provisions which, if fully met, will assure health care providers and other parties that they will not be prosecuted under the federal Anti-Kickback Law. Although full compliance with these provisions ensures against prosecution under the Anti-Kickback Law, the failure of a transaction or arrangement to fit within a specific safe harbor does not necessarily mean that the transaction or arrangement is illegal or that prosecution under the federal Anti-Kickback Law will be pursued. The

penalties for violating the Anti-Kickback Law include imprisonment for up to five years, fines of up to $250,000 per violation for individuals and up to $500,000 per violation for companies and possible exclusion from federal health care programs. Many states have adopted laws similar to the federal Anti-Kickback Law, and some of these state prohibitions apply to patients for health care services reimbursed by any source, not only federal health care programs such as Medicare and Medicaid.

In addition, there are two other health care fraud laws to which the Company may be subject, one which prohibits knowingly and willfully executing or attempting to execute a scheme or artifice to defraud any health care benefit program, including private payers ("fraud on a health benefit plan") and one which prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement or representation in connection with the delivery of or payment for health care benefits, items or services. These laws apply to any health benefit plan, not just Medicare and Medicaid.

The Company may also be subject to other laws which prohibit submitting claims for payment or causing such claims to be submitted that are false. Violation of these false claims statutes may lead to civil money penalties, criminal fines and imprisonment, and/or exclusion from participation in Medicare, Medicaid and other federally funded state health programs. These statutes include the federal False Claims Act, which prohibits the knowing filing of a false claim (or causing the submission of a false claim) or the knowing use of false statements to obtain payment from the U.S. federal government. When an entity is determined to have violated the False Claims Act, it must pay three times the actual damages sustained by the government, plus mandatory civil penalties of between $5,500 and $11,000 for each separate false claim. Suits filed under the False Claims Act can be brought by an individual on behalf of the government (a "qui tam action"). Such individuals (known as "qui tam relators") may share in the amounts paid by the entity to the government in fines or settlement. In addition certain states have enacted laws modeled after the False Claims Act. "Qui tam" actions have increased significantly in recent years causing greater numbers of health care companies to have to defend false claim actions, pay fines or be excluded from the Medicare, Medicaid or other federal or state health care programs as a result of an investigation arising out of such action.

Several states also have referral, fee splitting and other similar laws that may restrict the payment or receipt of remuneration in connection with the purchase or rental of medical equipment and supplies. State laws vary in scope and have been infrequently interpreted by courts and regulatory agencies, but may apply to all health care products and services, regardless of whether Medicaid or Medicare funds are involved.

Research and Development

The Company is currently focusing its limited resources primarily on broad commercialization of AutoloGel™, as well as integration and sales growth of the Angel® and ActivAT® products. It therefore expends only limited amounts on research and development activities ("R&D"). The Company currently has several development projects underway to enhance the AutoloGel™ System, seek additional indications for Angel®, and provide the necessary clinical data for its reimbursement and marketing efforts. The AutoloGel™ enhancements will further strengthen our competitive edge in the chronic wound market, and also facilitate our entry into other potential applications. The studies necessary to support additional indications for Angel® are relatively small laboratory studies. The studies designed are to support broader clinical acceptance and reimbursement for our products and currently do not require significant capital. The Company spent approximately $416,000 and $227,000 in total R&D expenditures in 2010 and 2009, respectively.

Employees

As of this Annual Report, the Company had approximately 20 employees, including the Company's management. The remaining personnel consist of scientific, sales and marketing, accounting, clinical, and investor relations professionals. None of the Company's employees is covered by a collective bargaining agreement or represented by a labor union. The Company considers its employee relations to be good.

ITEM 1A. Risk Factors

The Company faces many risks. The risks described below may not be the only risks the Company faces. Additional risks not yet known or currently believed to be immaterial may also impair Cytomedix's business. If any of the events or circumstances described in the following risks actually occurs, the Company's business, financial condition or results of operations could suffer, and the trading price of its Common stock could decline. You should consider the following risks, together with all of the other information in this Annual Report on Form 10-K, before making an investment decision with respect to Cytomedix securities.

Risks Relating to Our Business

There is Substantial Doubt As to Our Ability to Continue As a Going Concern

We have suffered recurring losses from operations and have insufficient liquidity to fund ongoing operations which raise substantial doubt about our ability to continue as a going concern. In addition, our financial statements have been prepared on the assumption that we will continue as a going concern, which contemplates the realization of assets and liquidation of liabilities in the normal course of business. However, there is substantial doubt about our ability to continue as a going concern. Accordingly, we will need to increase sales volume and obtain additional capital to continue as a going concern and to fund our operations, including to:

- Continue and increase investment in sales and marketing activities related to the AutoloGel™ System
- Pursue a strategic partner for CT-112
- Develop additional new products and/or make improvements to existing products
- Conduct additional trial(s) or studies to support efforts to obtain CMS reimbursement for our products
- Pursue existing and new claims covered by intellectual property we own or contemplate owning
- Manage and integrate successfully the recent acquisition of the Sorin assets
- Service the deferred payments on the same acquisition
- Sustain our corporate overhead requirements and hire and retain necessary personnel
- Pursue other potential attractive opportunities

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may not accomplish, we expect to finance future cash needs primarily through offerings of our debt or equity securities, strategic collaborations, or government grants. We do not know whether additional funding will be available on acceptable terms, or at all. If we are not able to secure additional funding when needed, we may have to delay, reduce the scope, or eliminate one or more of our programs, or substantially curtail or close our operations altogether. In addition, we may have to partner one or more of our technologies at an earlier stage of development, which could lower the economic value of those programs to us.

We Have Limited Sources of Working Capital

Because we were in bankruptcy in 2002 and due to the rights of some of our preferred shareholders, we may not be able to obtain debt financing. Working capital required to implement our business plan will most likely be provided by funds obtained through offerings of our equity securities, and revenues generated by us. No assurance can be given that we will have revenues sufficient to support and sustain our operations or that we would be able to obtain equity financing in the current economic environment. If we do not have sufficient working capital and are unable to generate sufficient revenues or raise additional funds, we may delay the completion of or significantly reduce the scope of our current business plan; delay some of our development and clinical or marketing efforts, our plans to pursue Medicare and/or commercial insurance reimbursement for our wound treatment technologies; or postpone the hiring of new personnel; or, under certain dire financial circumstances, cease our operations.

We Need Substantial Additional Financing, Which May Be Provided By Amounts Raised Under the Purchase Agreement.

We need substantial additional capital to fund our operations. To date, we have relied almost exclusively on financing transactions to fund our operations. Our inability to obtain sufficient additional financing would have a material adverse effect on our ability to implement our business plan and, as a result, could require us to diminish or suspend activities. At December 31, 2010, we had cash and cash equivalents of approximately $640 thousand, total current assets of approximately $3.6 million and total current liabilities of approximately $5.2 million. Under our current operating plan, and assuming we are able to sell the maximum of $10 million to Lincoln Park Capital, LLC ("LPC") under the purchase agreement dated October 5, 2010 (the "Purchase Agreement"), we believe we can fund our operations through 2011. However, our projections could be wrong. We could face unforeseen costs or our revenues could fall short of our projections. In addition, there is no assurance that we will be able to sell a sufficient number of shares under the Purchase Agreement to raise the aforementioned financing. New sources of capital may not be available to us when we need them or may be available only on terms we would not find acceptable. Additional financing will likely cause dilution to our stockholders and could involve the issuance of securities with rights senior to the outstanding shares. There is no assurance that such financing will be sufficient, that the financing will be available on terms acceptable to us and at such times as required, or that we will be able to obtain the additional financing required, if any, for the continued operation and growth of our business. Any inability to raise necessary capital will have a material adverse effect on our ability to implement our business strategy and will have a material adverse effect on our revenues and net income.

We may direct LPC to purchase up to $10 million of our shares of our common stock under our Purchase Agreement over a 25 month period, generally in amounts of up to 150,000 shares. However, LPC does not have the right nor the obligation to purchase any shares of our common stock on any business day that the price of our common stock is less than $.30 per share. We have registered 12,336,538 shares for sale by LPC related to the Purchase Agreement. In the event we elect to issue more than 12,336,538 shares offered hereby, we will be required to file a new registration statement and have it declared effective by the SEC. The extent to which we rely on LPC as a source of funding will depend on a number of factors including, the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from LPC were to prove unavailable or prohibitively dilutive, and if other sources of funding are available to us, we may determine not to sell shares to LPC under the Purchase Agreement.

Our Common Stock Has Been Delisted from the NYSE Amex, Which Subjects Us to the SEC's Penny Stock Rules and May Decrease the Liquidity of Our Common Stock.

We were previously operating under a compliance plan intended to allow us to regain compliance with the NYSE Amex's stockholders' equity requirement. On January 20, 2011, the Company notified the NYSE Amex staff of its intent to withdraw the request for a hearing and the NYSE Amex notified the Company that its stock would cease being listed on or about January 26, 2011.

Over-the-counter markets are generally considered to be less efficient than, and not as broad as, a stock exchange. There may be a limited market for our stock now that it is quoted on the OTC Bulletin Board, trading in our stock may become more difficult and our share price could decrease. Specifically, shareholders may not be able to resell their shares of common stock at or above the price paid for such shares or at all.

In addition, our ability to raise additional capital may be impaired because of the less liquid nature of the over-the-counter markets. While we cannot guarantee that we would be able to complete an equity financing on acceptable terms, or at all, we believe that dilution from any equity financing while our shares are quoted on an over-the-counter market could be substantially greater than if we were to complete a financing while our common stock is traded on a national securities exchange. Further, now that our stock is not traded on an exchange, upon the filing of our annual report for the year ended December 31, 2010, we will no longer be eligible to use short-form registration statements on Form S-3 for the registration of our securities, which could impair our ability to raise additional capital as needed.

Our common stock is also subject to penny stock rules, which impose additional sales practice requirements on broker-dealers who sell our common stock. The SEC generally defines "penny stock" as an equity security that has a market price of less than $5.00 per share, subject to certain exceptions. The ability of broker-dealers to sell our common stock and the ability of our stockholders to sell their shares in the secondary market will be limited and, as a result, the market liquidity for our common stock will likely be adversely affected. We cannot assure shareholders that trading in our securities will not be subject to these or other regulations in the future.

There is No Assurance that We Will Successfully Integrate the Angel® and ActivAt® Business, or that We Will Realize the Anticipated Synergies of the Combined Businesses.

The Angel® and ActivAT® business represent a significant increase in volume and revenue compared to our existing product line of AutoloGel™. There is no assurance that we will, on a sustainable basis, successfully integrate any or all of the various aspects to the acquired business, including but not limited to the sales, marketing, manufacturing, distribution, regulatory, and other functions. Failure to smoothly and successfully integrate the acquired business could lead to a reduction in revenue for the Angel® and ActivAT® products compared to historical levels, generate ill will among its customer base, and therefore have a material adverse affect on us, our operations or the price of our common stock. Furthermore, there is no assurance that we will realize synergies in the sales, marketing, distribution, reimbursement, or other areas as we currently contemplate. In addition, there is no assurance that we will realize any anticipated economies of scale for the combined businesses.

Our Inability to Make Timely Payments on the Secured Promissory Note Executed in the Sorin Acquisition May Adversely Affect Our Operations by Permitting Sorin to Foreclose on the Assets We Acquired from Sorin.

We paid a portion of consideration in connection with the Sorin acquisition by executing a promissory note in the amount of $5 million with interest accruing at 2.7% per annum, dated April 9, 2010. We are required to make periodic installment payments on the note (the first installment of which was paid as scheduled). The payments under the promissory note are secured by a first priority security interest on the business assets acquired in the Sorin acquisition. In the event we are unable to make such installment payments, we may be held in default of the Sorin note, and Sorin may foreclose upon all the assets that we acquired from Sorin in April 2010 and, therefore, our business and operations may be adversely affected in the event we are unable to make timely principal and interest payments or default on such promissory note.

The Restatement of Our Financial Statements in January 2011 has Subjected Us to Additional Risks and Uncertainties, Including Increased Professional Costs and the Increased Possibility of Legal Proceedings.

On January 6, 2011, the Company announced, among other things, in its Current Report on Form 8-K that, the previously issued financial statements for the year ended December 31, 2009 included in the Company's most recently filed Form 10-K/A Amendment No. 1, and each of the quarterly periods from March 31, 2009 through September 30, 2010 included in the Company's quarterly reports on Forms 10-Q were no longer reliable because they failed to incorporate non-cash charges resulting from required adjustments to certain outstanding warrants. On January 7, 2011, the Company filed its Annual Report on Form 10-K/A Amendment No. 2 as well as amended and restated Quarterly Reports on Forms 10-Q/A for the quarterly periods ended March 31, June 30 and September 30, 2009 and March 31, June 30, and September 30, 2010. The amendments to the Quarterly Reports on Forms 10-Q/A were filed to restate unaudited financial statements and related financial information for the periods contained in those reports. The amendment to the Annual Report on Form 10-K/A Amendment No. 2 was filed to restate financial statements for the fiscal year ended December 31, 2009.

As a result of the restatements, we have become subject to additional risks and uncertainties, including, among others, increased professional fees and expenses and time commitment that may be required to address matters related to the restatements, and scrutiny of the SEC and other regulatory bodies which could cause investors to lose confidence in the Company's reported financial information and could subject the Company to civil or criminal penalties or shareholder litigation. The Company could face monetary judgments, penalties or other sanctions that could have a material adverse effect on the Company's business, financial condition and results of operations and could cause its stock price to decline.

In addition, in connection with the foregoing restatements, the Company determined that there was a control deficiency in its internal control that constituted a material weakness. The Company implemented a remediation plan to address the material weakness and, as of December 31, 2010, concluded that it had successfully remediated said weakness (see Item 9A of this report for further detail). The Company will continue to review and make necessary changes to the overall design of the Company's internal control environment, as well as to policies and procedures to improve the overall effectiveness of internal control over financial reporting. Additionally, management may identify material weaknesses in the future that could adversely affect investor confidence, impair the value of the Company's common stock and increase the Company's cost of raising capital. There can be no assurance that additional material weaknesses will not be identified in the future.

An Interruption in our Supply Chain Could Have a Material Adverse Effect on Our Business

At the end of the fourth quarter of 2010, manufacturing responsibilities for all of the Angel® and ActivAT® products were transferred from Sorin to Cytomedix. Cytomedix is outsourcing the manufacturing of the various products composing these lines to contract manufacturers. While we believe these manufacturers to be of sufficient competency, quality, reliability, and stability, there is no assurance that one or more of them will not experience an interruption or inability to provide us with the products needed to satisfy customer demand. If a temporary or permanent interruption in the supply of products were to occur, it would have a material adverse effect on our business. While we are formulating plans to develop redundant capabilities, such capabilities will not take effect for the foreseeable future. While the Company does maintain business interruption insurance, there is no assurance that such insurance will be sufficient to cover all losses which would occur as a result of any interruption in supply.

Replacing our sole source supplier of bovine thrombin could result in unexpected delays and expenses.

Generally, we are not dependent on any one single source of component supplies to us for the AutoloGel™ System. We outsource manufacturing of all the components of the AutoloGel™ System. While we utilize single suppliers for several components of AutoloGel™, such components are generally readily commercially available on the open market and, therefore, we believe that, with one exception, no dependencies exist from its current sourcing practices. However, one reagent, bovine thrombin, is available exclusively through King Pharmaceuticals. If this reagent were no longer available at a reasonable cost from King Pharmaceuticals, we would need to purchase a substitute from new suppliers. If a new supplier needed to be located, the substitute or replacement materials or facilities would need to be tested for equivalency. Such equivalency tests could significantly delay product development, or delay or limit commercial sales of approved products and cause us to incur additional expense.

Adverse Conditions in the Global Economy and Disruption of Financial Markets May Significantly Restrict Our Ability to Generate Revenues or Obtain Debt or Equity Financing.

The global economy continues to experience volatility and uncertainty. Such conditions could reduce demand for our products which would significantly jeopardize our ability to achieve meaningful market penetration for AutoloGel™ and continued sales of Angel® and ActivAT® products. These conditions could also affect our potential strategic partners, which, in turn, could make it much more difficult to execute a strategic collaboration, and therefore significantly jeopardize our ability to fully develop and commercialize our products and product candidates. Global credit and capital markets continue to be relatively challenging. We may be unable to obtain capital through issuance of our equity securities, a significant source of funding for us throughout our history. If we are unable to secure funding through strategic collaborations, equity investments, or debt financing, we may not be able to achieve profitability, which may result in a cessation of operations.

Business credit and liquidity have tightened in much of the world. Volatility and disruption of financial markets could limit our customers' ability to obtain adequate financing or credit to purchase and pay for our products in a timely manner, or to maintain operations, and result in a decrease in sales volume. General concerns about the fundamental soundness of domestic and international economies may also cause customers to reduce purchases. Changes in governmental banking, monetary and fiscal policies to restore liquidity and increase credit availability may not be effective. Economic conditions and market turbulence may also impact our suppliers' ability to supply sufficient quantities of product components in a timely manner, which could

impair our ability to fulfill sales orders. It is difficult to determine the extent of the economic and financial market problems and the many ways in which they may affect our suppliers, customers, investors, and business in general. Continuation or further deterioration of these financial and macroeconomic conditions could significantly harm sales, profitability and results of operations.

Economic downturns or other adverse economic changes (local, regional, or national) can also hurt our financial performance in the form of lower interest earned on investments and/or could result in losses of portions of principal in our investment portfolio. While our investment policy requires us to invest only in short-term, low risk investments, there is no assurance that principal will not be eroded as a significant portion of these investments is in excess of federally mandated insurance.

We Have a History of Losses and Expect to Incur Losses for the Foreseeable Future.

We have a history of losses, are not currently profitable, and expect to incur substantial losses and negative operating cash flows in the future. We may never generate sufficient revenues to achieve and maintain profitability. We will continue to incur expenses at current or increased levels as we seek to expand our operations, pursue development of our technologies, work to increase our sales, implement internal systems and infrastructure, and hire additional personnel. These ongoing financial losses may adversely affect our stock price.

We Have a Short Operating History and Limited Operating Experience.

We must be evaluated in light of the uncertainties and complexities affecting an early stage biotechnology company. We have only recently implemented our commercialization strategy for AutoloGel™ and are still in the process of fully integrating the newly acquired Angel® and ActivAT® buiness. Thus, we have a very limited operating history. Continued operating losses, together with the risks associated with our ability to gain new customers for our product offerings, may have a material adverse effect on our liquidity. We may also be forced to respond to unforeseen difficulties, such as a decreased demand for our products and services, downward pricing trends, regulatory requirements and unanticipated market pressures. Since emerging from bankruptcy and continuing through today, we are developing a business model that includes protecting our patent position, addressing our third-party reimbursement issues, developing and executing a sales and marketing program, acquiring synergistic technologies and product lines, developing other technologies covered by, or derived from, our intellectual property, and seeking strategic partnerships. There can be no assurance that our business model in its current form can accomplish our stated goals.

Our Intellectual Property Assets Are Critical to Our Success

We regard our patents, trademarks, trade secrets and other intellectual property assets as critical to our success. We rely on a combination of patents, trademarks, and trade secret and copyright laws, as well as confidentiality procedures, contractual provisions, and other similar measures, to establish and protect our intellectual property. We attempt to prevent disclosure of our trade secrets by restricting access to sensitive information and requiring employees, consultants, and other persons with access to our sensitive information to sign confidentiality agreements. Despite these efforts, we may not be able to prevent misappropriation of our technology or deter others from developing similar technology in the future. Furthermore, policing the unauthorized use of our intellectual property assets is difficult and expensive. Litigation has been necessary in the past and may be necessary in the future in order to protect our intellectual property assets. Litigation could result in substantial costs and diversion of resources. We can provide no assurance that we will be successful in any litigation matter relating to our intellectual property assets. Continuing litigation or other challenges could result in one or more of our patents being declared invalid. In such a case, any royalty revenues from the affected patents would be adversely affected although we may still be able to continue to develop and market our products. Furthermore, the unauthorized use of our patented technology by otherwise potential customers in our target markets may significantly undermine our ability to generate sales.

Our patent covering the specific gel formulation that is applied as part of the AutoloGel™ System (the “Worden Patent”) expires no earlier than February 2019. Our U.S. Knighton Patent (which was the subject of license agreements between us and Medtronic, Inc., DePuy Spine, Inc., Biomet Biologics, Inc., COBE Cardiovascular, Inc., and Harvest Technologies Corporation, among others) expired in November 2009. In 2009, the license agreements under the Knighton Patent accounted for approximately 89% of our revenues.

Although the recent acquisition of the Sorin assets was intended to, among other things, replace the foregoing revenue loss, we provide no assurance that we will be successful in fully replacing and sustaining such revenue replacement of the royalty revenue. Furthermore, we may be more vulnerable to competitive factors because third parties will not then need a license from us to perform the methods claimed in the Knighton Patent.

Our Products are Subject to Governmental Regulation

Our success is also impacted by factors outside of our control. Our current technology and products may be subject to extensive regulation by numerous governmental authorities in the United States, both federal and state, and in foreign countries by various regulatory agencies. Specifically, our devices and bio-pharmaceutical products are subject to regulation by the FDA and state regulatory agencies. The FDA regulates drugs, medical devices and biologics that move in interstate commerce and requires that such products receive clearance or pre-marketing approval based on evidence of safety and efficacy. The regulations of government health ministries in foreign countries are analogous to those of the FDA in both application and scope. In addition, any change in current regulatory interpretations by, or positions of, state regulatory officials where our products are used could materially and adversely affect our ability to sell products in those states. The FDA will require us to obtain clearance or approval of new devices when used for treating specific wounds or marketed with specific wound healing claims, or for other products under development.

We believe all our products are legally marketed. As we expand and offer additional products in the United States and in foreign countries, clearance or approval from the FDA and comparable foreign regulatory authorities prior to introduction of any such products into the market may be required. We provide no assurance that we will be able to obtain all necessary approvals from the FDA or comparable regulatory authorities in foreign countries for these products. Failure to obtain the required approvals would have a material adverse impact on our business and financial condition.

Compliance with FDA and other governmental requirements imposes significant costs and expenses. Further, our failure to comply with these requirements could result in sanctions, limitations on promotional or other business activities, or other adverse effects on our business. Further, recent efforts to control healthcare costs could negatively affect demand for our products and services.

Clinical Trials May Fail to Demonstrate the Safety or Efficacy of Our Product Candidates

Our product candidates are subject to the risks of failure inherent in the development of biotherapeutic products. The results of early-stage clinical trials do not necessarily predict the results of later-stage clinical trials. Product candidates in later-stage clinical trials may fail to demonstrate desired safety and efficacy traits despite having successfully progressed through initial clinical testing. Even if we believe the data collected from clinical trials of its product candidates is promising, this data may not be sufficient to support approval by the U.S. or foreign regulatory agencies. Pre-clinical and clinical data can be interpreted in different ways. Accordingly, the regulatory officials could reach different conclusions in assessing such data, which could delay, limit or prevent regulatory approval. In addition, the U.S. regulatory authorities or we may suspend or terminate clinical trials at any time. Any failure or delay in completing clinical trials for product candidates, or in receiving regulatory approval for the sale of any product candidates, has the potential to materially harm our business, and may prevent it from raising necessary, additional financing that may be needed in the future.

A Disruption in Healthcare Provider Networks Could Have an Adverse Effect on Operations and Profitability

Our operations and future profitability are dependent, in large part, upon the ability to contract with healthcare providers on favorable terms. In any particular service area, healthcare providers could refuse to contract with Cytomedix or take other actions that could result in higher healthcare costs, or create difficulties in meeting our regulatory requirements. In some service areas, certain healthcare providers may have a significant market presence. If healthcare providers refuse to contract with us, use their market position to negotiate unfavorable contracts or place us at a competitive disadvantage, our ability to market services or to be profitable in those service areas could be adversely affected. Provider networks could also be disrupted by the financial insolvency of a large healthcare provider group. Any disruption in provider networks could adversely impact our ability to generate revenues or profits.

Our Sales and Marketing Strategy for the AutoloGel™ System May Not Succeed

In January 2009, we implemented a revised sales and marketing strategy that focuses on intensive clinician to clinician interaction with both prospective and existing customers, and the scientific explanation of AutoloGel™'s mechanism of action. There is no assurance that this approach will result in significant, sustainable growth in sales revenue, or that we, as currently capitalized, will have sufficient resources to provide the level of clinical support for this initiative to be successful.

CMS's Non-Coverage of AutoloGel™ Could Greatly Restrict Our Sales

The AutoloGel™ System is marketed to healthcare providers. Some of these providers, in turn, seek reimbursement from third-party payers such as Medicare, Medicaid, and other private insurers. Many foreign countries also have comprehensive government managed healthcare programs that provide reimbursement for healthcare products. Under such healthcare systems, reimbursement is often a determining factor in predicting a product's success, with some physicians and patients strongly favoring only those products for which they will be reimbursed. With CMS's national non-coverage determination, the market for the AutoloGel™ System is restricted and it may be difficult, if not impossible, to sell AutoloGel™ in most care settings. This currently hinders our ability to grow its revenues and could reduce the likelihood that it will ever achieve sustainable profitability. We provide no assurance that our efforts to obtain CMS coverage will be successful.

Our Intention to Develop a Plan to Secure Medicare Reimbursement Without Conducting a New Randomized Controlled Trial May Not Be Successful

In March 2008, CMS reaffirmed its 2003 non-coverage determination for autologous platelet rich plasma, which would include AutoloGel™. Following CMS's decision, we met with CMS, in April 2008, to discuss the optimal path for securing future coverage for AutoloGel™ and in concert with consultants and advisors, have developed a multi-pronged strategy to obtain Medicare reimbursement for AutoloGel™. We provide no assurance that we will ultimately be successful with this strategy and that CMS will decide that the evidence is sufficient to reverse all or a portion of its existing non-coverage determination. If we later determine that a new randomized, controlled trial is necessary, it could cost several millions of dollars and take multiple years to complete. We would almost certainly need to obtain additional, outside financing to fund such a trial.

We May Be Unable to Attract a Strategic Partner for the Further Development of CT-112

Due to our limited resources, we have determined that the best vehicle to move the development of CT-112 forward is through a strategic partnership, outlicensing, or other similar arrangement. While we have engaged in discussions with potential partners or licensees, there is no assurance that we will be able to come to any such agreement. Furthermore, even if such a strategic relationship regarding CT-112 is reached, there is no assurance that development milestones, clinical data, or other such benchmarks will be achieved. Therefore, CT-112 may never proceed toward commercialization or drive cash infusions for us, and we may ultimately not be able to monetize the patents, existing clinical data, and other intellectual property related to CT-112.

The Success of Our Products Is Dependent on Acceptance by the Medical Community

The commercial success of our products and processes will depend upon the medical community and patients accepting the therapies as safe and effective. If the medical community and patients do not ultimately accept the therapies as safe and effective, our ability to sell the products will be materially and adversely affected. While acceptance by the medical community may be fostered by broad evaluation via peer-reviewed literature, we may not have the resources to facilitate sufficient publication.

We May Be Unable to Attract and Retain Key Personnel

Our future success depends on the ability to attract, retain and motivate highly skilled management, including sales representatives. We have retained a team of highly qualified officers and consultants, but cannot provide assurance that we will be able to successfully retain all of them, or be successful in recruiting additional personnel as needed. Our inability to do so will materially and adversely affect the business prospects, operating results and financial condition of the Company. Our ability to maintain and provide additional services to our customers depends upon our ability to hire and retain business development and scientific and technical personnel with the skills necessary to keep pace with continuing changes in regenerative biological

therapy technologies. Competition for such personnel is intense; we compete with pharmaceutical, biotechnology and healthcare companies. Our inability to hire additional qualified personnel may lead to higher recruiting, relocation and compensation costs for such personnel. These increased costs may reduce our profit margins or make hiring new personnel impractical.

Legislative and Administrative Action May Have an Adverse Effect on Our Company

Political, economic and regulatory influences are subjecting the health care industry in the United States to fundamental change. We cannot predict what other legislation relating to our business or to the health care industry may be enacted, including legislation relating to third-party reimbursement, or what effect such legislation may have on our business, prospects, operating results and financial condition. We expect federal and state legislators to continue to review and assess alternative health care delivery and payment systems and possibly adopt legislation affecting further changes in the health care delivery system. Such laws may contain provisions that may change the operating environment for hospitals and managed care organizations. Health care industry participants may react to such legislation by curtailing or deferring expenditures and initiatives, including those relating to our products. Future legislation could result in modifications to the existing public and private health care insurance systems that would have a material adverse effect on the reimbursement policies discussed above. With growing pressures on government budgets due to the current economic downturn, government efforts to contain or reduce health care spending are likely to gain increasing emphasis. Several members of the current presidential administration and Congress are espousing support for cost-containment measures that could have significant implications for healthcare therapies, including our current and future products. If enacted and implemented, such measures could result in decreased revenue from our products and decrease potential returns from our research and development initiatives. Furthermore, there is no assurance that we will be able to successfully neutralize any lobbying efforts against our efforts to secure Medicare coverage or other initiatives we may have with governmental agencies.

We Could Be Affected by Malpractice Claims

Providing medical care entails an inherent risk of professional malpractice and other claims. We do not control or direct the practice of medicine by physicians or health care providers who use the products and do not assume responsibility for compliance with regulatory and other requirements directly applicable to physicians. There is no assurance that claims, suits or complaints relating to the use of our products and treatment administered by physicians will not be asserted against us in the future. The production, marketing and sale, and use of our products entails risks that product liability claims will be asserted against us. These risks cannot be eliminated, and we could be held liable for any damages that result from adverse reactions or infectious disease transmission. Such liability could materially and adversely affect our business, prospects, operating results and financial condition. We currently maintain professional and product liability insurance coverage, but cannot give assurance that the coverage limits of this insurance would be adequate to protect against all potential claims. We cannot assure that we will be able to obtain or maintain professional and product liability insurance in the future on acceptable terms or with adequate coverage against potential liabilities.

Our Products Have Existing Competition in the Marketplace

In the market for biotechnology products, we face competition from pharmaceutical companies, biopharmaceutical companies, medical device companies, and other competitors. Other companies have developed or are developing products that may be in direct competition with our current product line. Biotechnology development projects are characterized by intense competition. Thus, we cannot assure any investor that we will be the first to the market with any newly developed products or that we will successfully be able to market these products. If we are not able to participate and compete in the regenerative biological therapy market, our financial condition will be materially and adversely affected. We cannot assure that we will be able to compete effectively against such companies in the future. Many of these companies have substantially greater capital resources, larger marketing staffs and more experience in commercializing products. Recently developed technologies, or technologies that may be developed in the future, may be the basis for developments that will compete with our products.

The Sale of Our Common Stock to Lincoln Park May Cause Substantial Dilution to Our Existing Stockholders and the Sale of the Shares of Common Stock Acquired by Lincoln Park Could Cause the Price of Our Common Stock to Decline

In October 2010, we entered into certain Purchase Agreements with Lincoln Park Capital LLD ("LPC") whereby we could, but were not required to, sell shares of our Common stock to LPC over a two year period up to a maximum aggregate amount of $11.5 million (the "Purchase Agreements"). The number of shares ultimately offered for sale by LPC is dependent upon the number of shares we elect to sell to LPC under the Purchase Agreements. Depending upon market liquidity at the time, sales of shares of our common stock by LPC may cause the trading price of our common stock to decline. After it has acquired shares under the Purchase Agreements, LPC may sell all, some or none of those shares. Sales to LPC by us pursuant to the Purchase Agreements may result in substantial dilution to the interests of other holders of our Common stock. The sale of a substantial number of shares of our Common stock by LPC, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to LPC and the Purchase Agreements may be terminated by us at any time at our discretion without any cost to us.

Volatility of Our Stock Price Could Adversely Affect Current and Future Stockholders.

The market price of our common stock has been volatile, and fluctuates widely in price in response to various factors which are beyond our control. The price of our common stock is not necessarily indicative of our operating performance or long-term business prospects. In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These market fluctuations may also materially and adversely affect the market price of our common stock. Factors that could cause the market price of our common stock to fluctuate substantially include, among others:

- our ability or inability to execute our business plan;
- the dilutive effect or perceived dilutive effect of additional equity financings;
- investor perception of our company and of the industry;
- the success of competitive products or technologies;
- regulatory developments in the United States or overseas;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel; or
- general economic, political and market conditions.

The stock market in general has recently experienced extreme price and volume fluctuations. Continued market fluctuations could result in extreme volatility in the price of our common stock, which could cause a decline in the value of our common stock. Price volatility could be worse if the trading volume of our common stock is low.

We May Likely Issue Additional Equity or Debt Securities Which May Materially and Adversely Affect the Price of Our Common Stock

Sales of substantial amounts of shares of our common stock in the public market, or the perception that those sales may occur, could cause the market price of our common stock to decline. We have used, and will likely continue to use, our common stock or securities convertible into or exchangeable for common stock to fund working capital needs or to acquire technology, product rights or businesses, or for other purposes. If additional equity securities are issued, particularly during times when our common stock is trading at relatively low price levels, the price of our common stock may be materially and adversely affected.

There is a Limited Public Trading Market for Our Common Stock

The average daily trading volume in our common stock is relatively low. As long as this condition continues, it could be difficult to sell a significant number of shares of common stock at any particular time at the market prices prevailing immediately before such shares are offered. Shareholders may be required to hold shares of our common stock for an indefinite period of time. In addition, sales of substantial amounts of common stock could lower the prevailing market price of our common stock. This would limit or perhaps prevent our ability to raise capital through the sale of securities. Additionally, we have significant numbers of outstanding warrants and options that, if exercised and sold, could put additional downward pressure on the common stock price. In addition, in recent years the stock market in general, and the market for life sciences companies in particular, have experienced significant price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies, often for reasons unrelated to their operating performance, and it may adversely affect the price of our common stock. These broad market fluctuations may reduce the demand for our stock and therefore adversely affect the price of our securities, regardless of operating performance.

We are Subject to Anti-Takeover Provisions and Laws

Provisions in our restated certificate of incorporation and restated bylaws and applicable provisions of the Delaware General Corporation Law may make it more difficult for a third party to acquire control of us without the approval of our Board of Directors. These provisions may make it more difficult or expensive for a third party to acquire a majority of our outstanding voting common stock or delay, prevent or deter a merger, acquisition, tender offer or proxy contest, which may negatively affect our common stock price.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

The Company does not own any real property and does not intend to invest in any real property in the foreseeable future. The Company's offices and warehouse facilities are located in Gaithersburg, Maryland, and comprise approximately 4,100 square feet under a 40 month operating lease expiring December 2013. Monthly rent, including our share of certain annual operating costs and taxes, is approximately $5,800 per month, with the first four months free.

The Company also rents office space in Rockville, Maryland, under a lease expiring in June 2011. The Company has agreed in principle with the landlord to an early termination of this lease. Amounts totaling $18,000 to be paid under the early termination agreement have been accrued as of December 31, 2010.

ITEM 3. Legal Proceedings

At present, the Company is not engaged in or the subject of any legal proceedings.

ITEM 4. [Removed and Reserved]

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

From June 2005 through December 2010, the Company's Common stock has been listed on the NYSE Amex (formerly the American Stock Exchange) under the symbol "GTF." Set forth below are the high and low sale prices for the Common stock for each quarter in the two most recent fiscal years as reported by NYSE Amex. The quotations reflect inter-dealer prices, without retail markup, markdown, or commissions, and may not represent actual transactions.

Quarter ended	High	Low
December 31, 2010	$ 0.68	$ 0.42
September 30, 2010	$ 0.75	$ 0.48
June 30, 2010	$ 1.75	$ 0.41
March 31, 2010	$ 0.68	$ 0.39
December 31, 2009	$ 0.66	$ 0.36
September 30, 2009	$ 0.81	$ 0.35
June 30, 2009	$ 1.05	$ 0.28
March 31, 2009	$ 0.60	$ 0.18

Since January 26, 2011, the Company's Common stock has been quoted on the OTC Bulletin Board under the new trading symbol "CMXI". On March 18, 2011, the closing price of the Company's Common stock was $0.40.

Holders

There were approximately 547 shareholders of record of Common stock as of March 18, 2011.

Dividends

Cytomedix did not pay dividends to holders of Common stock in 2010 or 2009. The Company is prohibited from declaring dividends on Common stock if any dividends are due on shares of Series A, B, C or D Convertible Preferred stock. If there are no unpaid dividends on shares of Series A, B, C or D Convertible Preferred stock, any decision to pay cash dividends on Common stock will depend on the Company's ability to generate earnings, need for capital, and overall financial condition, and other factors the Board deems relevant. Cytomedix does not anticipate paying cash dividends on Common stock in the foreseeable future, but instead will retain any earnings for reinvestment in the business.

Issuer Purchases of Equity Securities

The Company did not make any stock repurchases during the last quarter of 2010.

Recent Sales of Unregistered Securities

In October 2010, the Company issued to Lincoln Park Capital Fund, LLC ("LPC") 305,944 shares of common stock as an initial commitment consideration. LPC, the sole purchaser in connection with the Purchase Agreement, was an "accredited investor" (as such term is defined in Rule 501(a) of Regulation D under the Securities Act of 1933, as amended (the "Securities Act")), and the Company sold the securities in reliance upon an exemption from registration contained in Section 4(2) and Rule 506 under the Securities Act.

ITEM 6. Selected Financial Data

As a smaller reporting issuer (as defined in Item 10(f)(1) of Regulation S-K), the Company is not required to report selected financial data specified in Item 301 of Regulation S-K.

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of the Company's financial condition and results of operations should be read in conjunction with the financial statements and related notes appearing elsewhere in this Annual Report. The discussion in this section regarding the Company's business and operations includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1996. Such statements consist of any statement other than a recitation of historical fact and can be identified by the use of forward-looking terminology such as "may," "expect," "anticipate," "estimate," or "continue," or the negative thereof or other variations thereof or comparable terminology. You are cautioned that all forward-looking statements are speculative, and there are certain risks and uncertainties that could cause actual events or results to differ from those referred to in such forward-looking statements. Actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the "Risk Factors" section and elsewhere in this Annual Report. The Company assumes no obligation to update any such forward-looking statements. The following should be read in conjunction with the audited financial statements and the notes thereto included elsewhere herein. Certain numbers in this section have been rounded for ease of analysis.

Historically, the Company's revenues have primarily been earned through its licensing agreements. These revenues, net of related royalty and contingent legal fees, represented the primary source of cash from operations for the Company in 2009. These revenues, which constituted approximately 89% of the Company's revenues in 2009, ceased at the end of November 2009 as the underlying license agreements expired at that time.

In April 2010, the Company acquired the Angel® and ActivAT® product lines from Sorin Group USA, Inc. As a result, the Company realized a significant increase in product sales in 2010. Since the acquisition we have seen no net attrition of sales while worldwide Angel® and ActivAt® sales have consistently increased throughout the year. Sales of AutoloGel™ continue to grow as a result of continued commercialization and sales efforts. We expect continued sales growth for both product lines in the following year. With the Angel® and ActivAT® product line transition complete, the Company can now turn its focus to driving sales growth. In addition, the acquisition has provided the Company with access to additional sales channels for AutoloGel™ both domestically and outside of the U.S. markets.

Although our revenues have increased, they still remain insufficient to cover our operating expenses. Operating expenses primarily consist of employee compensation, professional fees, consulting expenses, and other general business expenses such as insurance, travel expenses, and sales and marketing related items.

Comparison of Years Ended December 31, 2010 and 2009

Revenues

Revenues rose $1,845,000 (89%) to $3,911,000, comparing the year ended December 31, 2010, to the previous year. The increase was due to higher product sales of $3,562,000, mostly offset by lower royalties of $1,717,000. The increased product sales were primarily due to $3,422,000 of sales in the Angel® product line, which we acquired from Sorin Group USA, Inc. on April 9, 2010. AutoloGel™ sales were also up 62% to $141,000. Royalty revenues declined due to the expiration of the underlying licensing agreements in late November 2009, with only final close out adjustments recorded in 2010. We expect continued growth in product sales in 2011.

Gross Profit

Gross profit rose $691,000 (43%) to $2,298,000, comparing the year ended December 31, 2010, to the previous year. For the same periods, gross margins fell to 59% from 78%. Increased profits on higher product sales, primarily due to the Angel® acquisition, were only partly offset by a reduction in profits from royalties due to the expiration of the underlying patents. Cost of royalties in 2010 reflects a credit for final adjustments relating to the close-out of the licensing agreements described above. A 10% commission was charged to cost of sales for logistics support provided by Sorin during the months of April through July 2010 for US Angel® sales and April through December 2010 for non-US Angel® sales. The Angel® transition period was completed in December 2010. In the second quarter of 2010, finished goods inventory acquired from Sorin and valued at fair value in accordance with purchase accounting rules was expensed as these products were

sold in the ordinary course of business. Amortization expense, relating to the patents and technology acquired from Sorin, was recorded beginning in the second quarter of 2010 and will continue through the life of the patents.

The Company expects product margins to be in the 60 – 65% range in the upcoming quarters.

Operating Expenses

Operating expenses rose $2,644,000 (52%) to $7,701,000, comparing the year ended December 31, 2010, to the previous year. A discussion of the various components of Operating expenses follows below.

Salaries and Wages

Salaries and wages rose $567,000 (26%) to $2,750,000, comparing the year ended December 31, 2010, to the previous year. The increase was primarily a result of higher salaries ($287,000) due to additional employees and higher commission ($141,000) associated with increased product sales offset by lower stock based compensation ($97,000). Also, in 2009, the Company recorded a $161,000 credit to bonus expense as accrued bonuses were reversed.

Consulting Expenses

Consulting expenses rose $558,000 (236%) to $794,000, comparing the year ended December 31, 2010, to the previous year. The increase was primarily due to new spending associated with regulatory compliance and CMS reimbursement efforts and the addition of dedicated consultants in the areas of marketing, finance, and European operations.

Professional Fees

Professional fees rose $397,000 (56%) to $1,107,000, comparing the year ended December 31, 2010, to the previous year. The increase was primarily due to legal and accounting costs associated with the Company's April 2010 acquisition of the Angel® and ActivAT® product lines.

Trials and Studies

Trials and studies expenses rose $188,000 (83%) to $416,000, comparing the year ended December 31, 2010, to the previous year. The increase was due to higher spending around development of the enhanced AutoloGel™ device, the AutoloGel™ package redesign, and on our TAPS program (post-market surveillance study) for the AutoloGel™ System offset by reduced spending on CT-112.

General and Administrative Expenses

General and administrative expenses rose $934,000 (55%) to $2,635,000, comparing the year ended December 31, 2010, to the previous year. The increase was primarily due to higher commissions paid to independent sales agents ($125,000) as the Company expanded its sales efforts, benefits ($94,000) due to additional employees, investor services ($104,000), sales supplies ($37,000), Board fees ($34,000) as the Board elected to forfeit a greater portion of its cash compensation in the 2009 period, amortization of intangibles ($82,000), travel ($68,000), tax expense ($74,000) as a result of a sales tax accrual, and setup costs ($131,000) related to the establishment of manufacturing services for the Angel® and ActivAT® product lines.

Other (Expense) Income

Other expense rose by $1,590,000 to $1,400,000, comparing the year ended December 31, 2010, to the previous year, primarily as a result of increased interest expense (comprised of interest on the promissory note payable to Sorin and the amortization of the deferred debt issuance costs associated with the warrants issued to certain shareholders who provided partial guarantees to Sorin for the promissory note) and changes in the fair value of derivative liabilities mainly due to the change in the Company's stock price

Liquidity and Capital Resources

There is substantial doubt that the Company will continue as a going concern. Since inception we have incurred, and continue to incur significant losses from operations. The licensing agreements, under which the Company's royalty revenues were generated, expired in late November 2009. The Angel® and ActivAT®

product lines, acquired in April 2010, historically generated approximately $5 million per year. The Company has successfully integrated those product lines and has maintained those revenue results.

In October 2010, we completed a $1.5 million capital raise, of which approximately $900,000 was immediately used to fund the first installment payment plus interest to Sorin under the Note Payable arising as a result of the Angel® and ActivAT® acquisition. We made an $800,000 installment payment on October 9, 2010. Future installment payments in the amounts of $800,000, $1,200,000, $1,200,000, and $1,000,000, respectively, are due in 6 month intervals beginning April 9, 2011.

The Company needs to sustain and grow Angel® and ActivAT® product sales and increase sales of AutoloGel™ to meet its business objectives. There is no assurance that the Company will be successful in this regard. The Company will also require additional capital to finance the further development of its business operations and to satisfy further installments under the Note Payable to Sorin. In October 2010, the Company entered into two separate Purchase Agreements with Lincoln Park Capital ("LPC") which may allow the Company to sell up to 150,000 shares of common stock every other business day to LPC within certain pre-defined parameters (including a minimum share per price of $0.30), up to an aggregate amount of $11.5 million over a 25 month period. From November 17, 2010 through March 3, 2011, the Company has raised approximately $1.8 million under the LPC Purchase Agreements.

We believe that the amounts available under the Purchase Agreements with LPC (provided that the purchase price per share remains above $0.30) and significant planned sales growth of the Angel® and ActivAT® products, along with the successful execution of our sales strategy for AutoloGel™, will be sufficient to fund our operations and satisfy our promissory note commitments and planned capital expenditures through 2011. There is no assurance that we will be able to meet our sales targets or that we will be able to raise sufficient capital through the LPC Purchase Agreements to fund our operations, meet our promissory note commitments, or invest in planned capital expenditures.

Additional cash, in excess of those amounts secured under the LPC Purchase Agreements, may be required for the Company to pursue all elements of its strategic plan. Specific programs that may require additional funding include, without limitation, accelerated investment in the sales, marketing, distribution, and customer service areas, significant new product development or modifications, conduct of any trials the Company may deem necessary in order to obtain CMS coverage, and pursuit of certain other attractive opportunities for the Company. We would likely raise such additional capital through the issuance of our equity securities, which may result in significant dilution to our investors. The Company's ability to raise additional capital is dependent on, among other things, the state of the financial markets at the time of any proposed offering. Given the current state of the financial markets, the ability to raise capital may be significantly diminished. We are also exploring potential strategic partnerships, which could provide a capital infusion to the Company. However, it may be necessary to partner one or more of our technologies at an earlier stage of development, which could cause the Company to share a greater portion of the potential future economic value of those programs with its partners. The Company is also exploring the possibility of obtaining grant funding for some of its ongoing projects, but it is too early to determine whether these efforts are likely to be successful. Because of certain restrictive covenants relating to its preferred stock, we may not be able to obtain traditional debt financing. There is no assurance that additional funding, through any of the aforementioned means, will be available on acceptable terms, or at all. If adequate capital cannot be obtained on a timely basis and on satisfactory terms, the Company's operations could be materially negatively impacted.

The Company is currently conducting a post-market surveillance study per its understanding reached with the FDA. The Company estimates that this study, designed to treat 300 patients, which began in the third quarter of 2008, will cost between $500,000 and $700,000 in total. Of that amount, approximately $280,000 has been incurred through December 31, 2010. We have treated approximately 115 patients in this study so far, and no adverse events have been reported. We will likely seek a release from gathering further data based on the positive results received to date. However, there is no assurance that the FDA will grant such release.

In 2011, we are committed to $432,000 in capital expenditures representing Angel® machines sufficient to address forecasted customer demand.

The Company has certain warrants that are callable by the Company, subject to certain requirements including a minimum per share price ranging from $4 to $6, at an aggregate exercise price of approximately $6.0 million.

Inflation

The Company believes that the rates of inflation in recent years have not had a significant impact on its operations.

Off-Balance Sheet Arrangements

The Company does not have any off-balance sheet arrangements.

Critical Accounting Policies

Stock-Based Compensation

Under the Company's Long Term Incentive Plan (the "LTIP"), it grants share-based awards to eligible employees, directors, and service providers to purchase shares of Common stock. The fair values of these awards are determined on the dates of grant or issuance and are recognized as expense over the service periods.

The Company estimates the fair value of stock options on the date of grant using the Black-Scholes-Merton option-pricing formula ("Black-Scholes model"). The determination of fair value using this model requires the use of certain estimates and assumptions that affect the reported amount of compensation cost recognized in the Company's Consolidated Statements of Operations. These include estimates of the expected term of the option, expected volatility of the Company's stock price, expected dividends and the risk-free interest rate. These estimates and assumptions are highly subjective and may result in materially different amounts should circumstances change and the Company employ different assumptions in future periods. The Company estimates the fair value of stock issuances based on the closing market value of the Company's stock on the date of grant.

For share-based awards issued during the year ended December 31, 2010 and 2009, the expected term was estimated by using peer company information as Cytomedix's history is limited. Estimated volatility was derived using the Company's historical stock price volatility. No cash dividends have ever been declared or paid on the Company's Common stock and currently none is anticipated. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards.

In certain select cases, the Company has issued warrants, outside the LTIP, to service providers in exchange for the performance of consulting or other services. These warrants have generally been immediately vested and expense was recognized equal to the fair value of the warrant on the date of grant using the Black-Scholes model. The same assumptions (and related risks) as discussed above apply, with the exception of the expected term. For these warrants issued to service providers, the Company estimates that the warrant will be held for the full term.

Business Combinations

When the Company determines that an agreement constitutes a business combination it accounts for it by applying the acquisition method. Under this method the Company allocates the purchase price to the assets acquired and liabilities assumed based on their estimated fair values at the date of acquisition, including intangible assets that arise from contractual or other legal rights or are separable (i.e. capable of being sold, transferred, licensed, rented, or exchanged separately from the entity). Determination of fair value is based on certain estimates and assumptions regarding such things as forecasted future revenues and expenses, customer attrition, prevailing royalty rates, required rates of return, etc. The purchase price in excess of the fair value of the net assets and liabilities is recorded as goodwill. See further discussion regarding the accounting for the Angel® Business (hereinafter defined) combination.

Revenue Recognition

The Company recognizes revenue in accordance with FASB ASC 605,*Revenue Recognition*. ASC 605 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an

arrangement exists; (2) delivery has occurred or services rendered; (3) consideration is fixed or determinable; and (4) collectibility is reasonably assured.

With the acquisition of the Angel® business, the Company acquired various customer agreements. Some of these agreements are for sales of disposable processing sets and supplies to existing customers, and the remaining agreements combine the (i) usage or leasing of blood separation processing equipment, (ii) maintenance of processing equipment, and (iii) purchase of disposable processing sets and supplies.

Revenue from sales of disposable processing sets and supplies is recognized upon shipment of products to the customers. The Company does not maintain a reserve for returned products as in the past those returns have been negligible.

In regards to those agreements that combine the usage of the blood separation processing equipment with the sale of disposable processing sets and supplies and maintenance, the consideration is allocated to the various elements in accordance with the guidance for multiple element arrangements under *ASC 605 — Revenue recognition*. Based on the terms contained in the agreements, any payments under these agreements are contingent on the customer ordering additional disposable processing sets and supplies, and the customers are not required to purchase any minimum guaranteed quantity of products during the term of the agreements. The usage of the blood separation processing equipment is accounted for as an operating lease in accordance with *ASC 840 — Leases*, and as result of payments being contingent upon the ordering by the customer of new products, any rental income is recorded following the contingent rental method when rental income is earned and collectability is reasonably assured. The sale of disposable processing sets and supplies and maintenance are deemed a combined unit of accounting because the Company does not have objective and reliable evidence of fair value of the maintenance component on the arrangement. However, since (a) any consideration for disposable processing sets and supplies and maintenance is contingent upon the customer ordering additional disposable processing sets and supplies and (b) both the disposable products and maintenance services are provided over the same term, the Company recognizes revenue for this combined unit of accounting following the contingent revenue method at the time disposable products are delivered based on prices contained in the agreement. Rental income is currently less than 10% of total revenue and the Company therefore does not make separate disclosure in the statement of operations

Percentage based fees on licensee sales of covered products are generally recorded as products are sold by licensees and are reflected as Revenues in the Royalties line of the Consolidated Statements of Operations. Under certain agreements, Cytomedix has received lump sum payments. If the lump sum payment is deemed to be an inducement to enter into an agreement, and is applicable to some future period, then this amount is recorded as deferred revenue and amortized to revenue on a straight line basis over the course of the agreement.

Direct costs associated with product sales and royalty revenues are recorded at the time that revenue is recognized.

Valuation of Goodwill

The Company is required to perform a review for impairment of goodwill in accordance with FASB ASC 350, *Intangibles — Goodwill and Other*. Goodwill is considered to be impaired if it is determined that the carrying value of the Company exceeds its fair value. In addition to the annual review, an interim review is required if an event occurs or circumstances change that would more likely than not reduce the fair value of the Company below its carrying amount. Examples of such events or circumstances include:

- a significant adverse change in legal factors or in the business climate;
- a significant decline in Cytomedix's stock price or the stock price of comparable companies;
- a significant decline in the Company's projected revenue or cash flows;
- an adverse action or assessment by a regulator;
- unanticipated competition;
- a loss of key personnel;

- a more-likely-than-not expectation that the Company will be sold or otherwise disposed of;
- a substantial doubt about the Company's ability to continue as a going concern.

Valuation of Intangibles

The Company capitalizes the costs of purchased patents, trademarks, customer, and technology related intangibles. These intangibles are amortized via the straight-line method over their estimated useful lives. The Company accounts for finite-lived intangibles under FASB ASC 350, *Intangibles — Goodwill and Other*, and therefore reviews the recoverability of long-lived and finite-lived intangible assets when circumstances indicate that the carrying amount of assets may not be recoverable.

Financial Instruments

The balance sheets include various financial instruments that are carried at fair value. Fair value is the price that would be received from the sale of an asset or paid to transfer a liability assuming an orderly transaction in the most advantageous market at the measurement date. U.S. GAAP establishes a hierarchical disclosure framework which prioritizes and ranks the level of observability of inputs used in measuring fair value. These tiers include:

- Level 1, defined as observable inputs such as quoted prices in active markets for identical assets;
- Level 2, defined as observable inputs other than Level I prices such as quoted prices for similar assets; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

An asset's or liability's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. At each reporting period, we perform a detailed analysis of our assets and liabilities that are measured at fair value. All assets and liabilities for which the fair value measurement is based on significant unobservable inputs or instruments which trade infrequently and therefore have little or no price transparency are classified as Level 3.

The Company accounts for derivative financial instruments under ASC 815,*Accounting for Derivative Instruments and Hedging Activities*, as amended and interpreted. ASC 815 requires that we recognize all derivatives on the balance sheet at fair value. Certain warrants issued in 2009 and prior years meet the definition of derivative liabilities. In addition, in October 2010, we executed an equity transaction in which detachable stock purchase warrants were sold. These warrants also contain characteristics that meet the definition of a derivative liability and will be adjusted to fair value using the Black-Scholes model. This model determines fair value by requiring the use of estimates that include the contractual term of the warrant, expected volatility of the Company's stock price, expected dividends and the risk-free interest rate. Changes in fair value are classified in Other income (expense) in the consolidated statement of operations at every balance sheet date.

Commission Costs

As part of the acquisition of the Angel® and ActivAT® product lines from Sorin Group, the Company and Sorin Group entered into a Transition Services Agreement to which Sorin Group would provide certain logistical services to the Company. These services would be charged to the Company in the form of commissions. ASC 605 provides guidance for the determination on the accounting for these commissions. Using the guidance provided under ASC 605 the Company accounts for these commissions as a Cost of Sales.

Recent Accounting Pronouncements

In October 2009, the FASB issued ASU No. 2009-13, *Multiple-Deliverable Revenue Arrangements*, or ASU 2009-13, which amends existing revenue recognition accounting pronouncements that are currently within the scope of FASB ASC 605, *Revenue Recognition*. This guidance eliminates the requirement to establish the fair value of undelivered products and services and instead provides for separate revenue recognition based upon management's estimate of the selling price for an undelivered item when there is no

other means to determine the fair value of that undelivered item. ASU 2009-13 is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

In December 2010, the FASB issued ASU No. 2010-28, *Intangibles — Goodwill and Other*, or ASU 2010-28, which amends the goodwill impairment test outlined in FASB ASC 350. This guidance modifies Step 1 of the goodwill impairment test for reporting units with zero or negative carrying amounts. For those reporting units, an entity is required to perform Step 2 of the goodwill impairment test if it is more likely than not that a goodwill impairment exists. In determining whether it is more likely than not that a goodwill impairment exists, an entity should consider whether there are any adverse qualitative factors indicating that an impairment may exist. ASU 2009-28 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2010. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

In January 2010, the FASB issued ASU No. 2010-06, *Fair Value Measurements and Disclosures*, or ASU 2010-06. This update requires new disclosures of transfers in and out of Levels 1 and 2 and of activity in Level 3 fair value measurements. The update also clarifies the existing disclosures for levels of disaggregation and about inputs and valuation techniques. ASU 2010-06 is effective for interim and annual reporting periods beginning after December 15, 2009, except for the disclosures about purchases, sales, issuances, and settlements in the roll-forward of activity in Level 3 fair value measurements. These disclosures are effective for fiscal years beginning after December 15, 2010, and for interim periods within those fiscal years. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk

As a smaller reporting issuer (as defined in Item 10(f)(1) of Regulation S-K), the Company is not required to report quantitative and qualitative disclosures about market risk specified in Item 305 of Regulation S-K.

ITEM 8. Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Cytomedix, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity (deficit) and of cash flows present fairly, in all material respects, the financial position of Cytomedix, Inc. and its subsidiaries at December 31, 2010 and December 31, 2009, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements 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 financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring losses from operations and has insufficient liquidity to fund its ongoing operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP

Baltimore, Maryland
March 30, 2011

CYTOMEDIX, INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2010	December 31, 2009
ASSETS		
Current assets		
Cash	$ 638,868	$ 2,107,499
Short-term investments, restricted	52,817	52,672
Accounts and royalties receivable, net	1,207,027	180,560
Inventory	627,984	25,986
Prepaid expenses and other current assets	610,409	140,745
Deferred costs, current portion	357,412	10,935
Total current assets	3,494,517	2,518,397
Property and equipment, net	1,324,996	84,623
Deferred costs	191,153	42,063
Other intangibles, net	3,182,875	—
Goodwill	706,823	—
Total assets	$ 8,900,364	$ 2,645,083
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities		
Accounts payable and accrued expenses	$ 3,558,161	$ 1,037,894
Note payable, current portion	1,520,947	—
Dividends payable on preferred stock	92,853	7,285
Derivative liabilities, current portion	—	391
Total current liabilities	5,171,961	1,045,570
Note payable	1,981,208	—
Derivative and other liabilities	1,826,447	623,462
Total liabilities	8,979,616	1,669,032
Commitments and contingencies		
Stockholders' equity (deficit)		
Series A Convertible preferred stock; $.0001 par value, authorized 5,000,000 shares; 2010 and 2009 issued and outstanding – 97,663 shares, liquidation preference of $97,663	10	10
Series B Convertible preferred stock; $.0001 par value, authorized 5,000,000 shares; 2010 and 2009 issued and outstanding – 65,784 shares, liquidation preference of $65,784	7	7
Series C Convertible preferred stock; $.0001 par value, authorized 1,000,000 shares; 2010 and 2009 issued and outstanding – 0.0 shares	—	—
Series D Convertible preferred stock; $.0001 par value, authorized 2,000,000 shares; 2010 issued and outstanding – 3,315 shares, liquidation preference of $3,315,000	—	—
Common stock; $.0001 par value, authorized 100,000,000 shares; 2010 issued and outstanding – 44,103,743 shares; 2009 issued and outstanding – 37,273,628 shares	4,410	3,727
Additional paid-in capital	47,587,964	41,827,199
Accumulated deficit	(47,671,643)	(40,854,892)
Total stockholders' equity (deficit)	(79,252)	976,051
Total liabilities and stockholders' equity (deficit)	$ 8,900,364	$ 2,645,083

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

CYTOMEDIX, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2010	**2009**
Revenues		
Sales	$ 3,787,935	$ 226,212
Royalties	123,098	1,839,972
Total revenues	3,911,033	2,066,184
Cost of revenues		
Cost of sales	1,799,352	58,690
Cost of royalties	(186,402)	400,115
Total cost of revenues	1,612,950	458,805
Gross profit	2,298,083	1,607,379
Operating expenses		
Salaries and wages	2,750,014	2,183,082
Consulting expenses	793,591	235,929
Professional fees	1,106,626	709,479
Research, development, trials and studies	415,633	227,490
General and administrative expenses	2,635,145	1,700,863
Total operating expenses	7,701,009	5,056,843
Loss from operations	(5,402,926)	(3,449,464)
Other income (expense)		
Interest, net	(798,671)	9,764
Change in fair value of derivative liabilities	(572,313)	190,888
Other	(28,841)	(10,405)
Total other income (expenses)	(1,399,825)	190,247
Loss before provision for income taxes	(6,802,751)	(3,259,217)
Income tax provision	14,000	—
Net loss	(6,816,751)	(3,259,217)
Preferred dividends:		
Series A preferred stock	8,379	7,738
Series B preferred stock	5,698	7,213
Series D preferred stock	260,991	—
Amortization of beneficial conversion feature on Series D preferred stock	1,948,155	—
Net loss to common stockholders	$ (9,039,974)	$ (3,274,168)
Loss per common share –		
Basic and diluted	$ (0.23)	$ (0.09)
Weighted average shares outstanding –		
Basic and diluted	38,668,698	35,116,049

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

CYTOMEDIX, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

	Series A Preferred		Series B Preferred		Series D Preferred		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2008	90,217	$ 9	92,300	$ 10	—	$ —	33,962,623	$ 3,396	$42,219,802	$(39,077,878)	$ 3,145,339
Cumulative effect of adoption of new accounting guidance	—	—	—	—	—	—	—	—	(1,615,431)	1,497,154	(118,277)
Common stock issued upon conversion of Series B stock	—	—	(33,979)	(4)	—	—	11,326	1	3	—	—
Dividend issued on Series A and Series B stock	7,446	1	7,463	1	—	—	—	—	14,907	—	14,909
Common stock issued pursuant to registered direct offering completed in Third Quarter 2009 (including repricing of certain warrants)	—	—	—	—	—	—	3,299,679	330	764,492	—	764,822
Stock-based compensation related to options and warrants issued for services rendered by –											
Employees and Directors	—	—	—	—	—	—	—	—	431,846	—	431,846
Other parties	—	—	—	—	—	—	—	—	11,580	—	11,580
Net loss	—	—	—	—	—	—	—	—	—	(3,274,168)	(3,274,168)
Balance at December 31, 2009	97,663	$ 10	65,784	$ 7	—	$ —	37,273,628	$ 3,727	$41,827,199	$(40,854,892)	$ 976,051

CYTOMEDIX, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) – (continued)

	Series A Preferred		Series B Preferred		Series D Preferred		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Series D Preferred stock and warrants issued pursuant to private placement completed in Second Quarter	—	—	—	—	3,650	—	—	—	3,227,124	—	3,227,124
Common stock issued upon conversion of Series D stock	—	—	—	—	(335)	—	762,750	76	(76)	—	—
Dividends accrued on Series A, B and D stock	—	—	—	—	—	—	—	—	(275,068)	—	(275,068)
Dividends on Series D stock, paid in Common shares	—	—	—	—	—	—	371,927	37	189,463	—	189,500
Common stock issued upon exercise of August 2009 warrants	—	—	—	—	—	—	274,251	28	165,675	—	165,703
Adjustments of derivative liability for August 2009 warrants exercised and anti-dilutive issuances, net	—	—	—	—	—	—	—	—	165,573	—	165,573
Warrants issued pursuant to the Guaranty Agreements executed in connection with the Promissory Note payable	—	—	—	—	—	—	—	—	655,260	—	655,260
Common stock and warrants issued pursuant to registered direct offering completed in Fourth Quarter	—	—	—	—	—	—	3,727,677	373	628,102	—	628,475
Common stock issued pursuant to equity purchase agreements executed in October 2010	—	—	—	—	—	—	1,693,510	169	593,751	—	593,920
Stock-based compensation related to options and warrants issued for services rendered by –											
Employees and Directors	—	—	—	—	—	—	—	—	360,269	—	360,269
Other parties	—	—	—	—	—	—	—	—	50,692	—	50,692
Net loss	—	—	—	—	—	—	—	—	—	(6,816,751)	(6,816,751)
Balance at December 31, 2010	97,663	$ 10	65,784	$ 7	3,315	$ —	44,103,743	$4,410	$47,587,964	$(47,671,643)	$ (79,252)

CYTOMEDIX, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2010	2009
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(6,816,751)	$(3,259,217)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	440,178	44,927
Stock-based compensation	410,961	443,426
Change in fair value of derivative liabilities	572,313	(190,888)
Amortization of deferred costs	263,337	—
Deferred income tax provision	14,000	—
Loss (Gain) on disposal of assets	7,567	(1,116)
Change in assets and liabilities net of effects from acquisition of Angel business:		
Change in accounts and royalties receivable, net	(1,026,467)	312,797
Change in inventory	549,037	11,201
Change in other current assets	(305,604)	12,788
Change in accounts payable and accrued expenses	2,356,062	(287,431)
Change in deferred revenues	—	(197,344)
Change in other liabilities	—	(123,241)
Net cash used in operating activities	(3,535,367)	(3,234,098)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of investment	--	(52,672)
Capital expenditures	(774,625)	(31,424)
Payment for acquisition of Angel business	(2,000,000)	—
Proceeds from sale of equipment	54,632	1,900
Net cash used in investing activities	(2,719,993)	(82,196)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from sale of common stock and warrants, net	1,900,605	1,396,767
Proceeds from sale of preferred stock and warrants, net	3,227,124	—
Repayment of note payable	(506,703)	—
Proceeds from warrant exercises	165,703	—
Net cash provided by financing activities	4,786,729	1,396,767
Net decrease in cash	(1,468,631)	(1,919,527)
Cash, beginning of period	2,107,499	4,027,026
Cash, end of period	$ 638,868	$ 2,107,499

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Description of the Business

Cytomedix ("The Company") develops, sells, and licenses regenerative biological therapies intended to aid the human body in regenerating/healing itself, to primarily address the areas of wound care and orthopedic surgery. The Company currently markets the AutoloGel™ System, a device for the production of platelet rich plasma ("PRP") gel derived from the patient's own blood. The AutoloGel™ System is cleared by the Food and Drug Administration ("FDA") for use on a variety of exuding wounds. The Company is currently pursuing a multi-faceted strategy to penetrate the chronic wound market with its AutoloGel™ System.

In April 2010, the Company acquired the Angel® Whole Blood Separation System ("Angel®") and ActivAT® Autologous Thrombin Processing Kit ("ActivAT®") from Sorin Group USA, Inc ("Sorin"). Used primarily in operating rooms, Angel® is used for separation of whole blood into red cells, platelet poor plasma and platelet rich plasma. ActivAT® is designed to produce autologous thrombin serum from platelet poor plasma and is sold exclusively in Europe and Canada, where it provides a safe alternative to bovine-derived products.

The Company is also pursuing opportunities for the application of AutoloGel™ and Angel® into other markets such as hair transplantation and orthopedics, as well as actively seeking complementary products for regenerative medicine markets.

Cytomedix sells its products primarily to health care providers in the United States. Until November 2009, it licensed certain of its patents to surgical medical device suppliers in the United States; these license agreements and the revenue streams associated therewith, have since terminated as the underlying patents have expired.

Note 2 — Liquidity Risks and Management's Plans

The accompanying financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Since inception, the Company has incurred, and continues to incur, significant losses from operations. The licensing agreements, under which the Company's royalty revenues were generated, expired in late November 2009. The Angel® and ActivAT® product lines, acquired in April 2010, historically generated approximately $5 million per year. The Company has generated revenue of $3.4 million on those product lines through December 31, 2010.

In October 2010, the Company completed a $1.5 million capital raise, of which approximately $900,000 was immediately used to fund the first installment payment plus interest to Sorin under the Note Payable arising as a result of the Angel® and ActivAT® acquisition. The Company needs to sustain and grow Angel® and ActivAT® product sales and increase sales of AutoloGel™ to meet its business objectives. There is no assurance that the Company will be successful in this regard.

The Company will also require additional capital to finance the further development of its business operations and to satisfy further installments under the Note Payable to Sorin. In October 2010, the Company entered into two separate Purchase Agreements with Lincoln Park Capital ("LPC") which may allow the Company to sell up to 150,000 shares of common stock every other business day to LPC within certain pre-defined parameters (including a minimum share per price of $0.30), up to an aggregate amount of $11.5 million over a 25 month period. There is no assurance that the amounts raised under the Purchase Agreements will be sufficient to fund our operational cash flow needs and service the Note Payable.

The Company may therefore need to seek additional capital through other issuances of our equity securities, strategic collaborations, grant funding, or any other means we deem appropriate. There is no assurance that such capital will be available on acceptable terms or at all. As a result, there is substantial doubt as to the Company's ability to continue as a going concern.

In the event the Company is unable to successfully sustain and increase product sales as described above and obtain additional capital, it is unlikely that the Company will have sufficient cash flows and liquidity to finance its business operations as currently contemplated. Accordingly, if the Company determines it will not be able to obtain the necessary financing to address its working capital needs for a reasonable period into the

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 2 — Liquidity Risks and Management's Plans – (continued)

future, it may pursue alternative paths forward for the Company. These paths could include, but not be limited to, sale of the Company or its assets, merger, organized wind-down, going private/dark, fundamental shift in its strategic plan (e.g. abandon commercialization strategy and focus exclusively on licensing), bankruptcy, etc.

The financial statements do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue in existence.

Note 3 — Summary of Significant Accounting Policies

Basis of Presentation

The Company's financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. They include the accounts of the company and our subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. Certain financial information is based on fresh-start accounting utilized upon the Company's emergence from bankruptcy in July 2002. Certain prior period amounts have been reclassified to conform to the current period presentation with no impact to net loss.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Actual results could differ from those estimates.

Business Combinations

When the Company determines that an agreement constitutes a business combination it accounts for it by applying the acquisition method. Under this method the Company allocates the purchase price to the assets acquired and liabilities assumed based on their estimated fair values at the date of acquisition, including intangible assets that arise from contractual or other legal rights or are separable (i.e. capable of being sold, transferred, licensed, rented, or exchanged separately from the entity). Determination of fair value is based on certain estimates and assumptions regarding such things as forecasted future revenues and expenses, customer attrition, prevailing royalty rates, required rates of return, etc. The purchase price in excess of the fair value of the net assets and liabilities is recorded as goodwill. See further discussion regarding the accounting for the Angel® Business (hereinafter defined) combination in Note 4 — Acquisition.

Concentration of Risk

As of December 31, 2010 and 2009, the Company maintained no amounts in financial institutions in excess of Federal Deposit Insurance Corporation ("FDIC") insurance. As of December 31, 2009 approximately $1,482,000 held in money market accounts at brokerage firms was in excess of Securities Investor Protection Corporation ("SIPC"). This amount not covered by SIPC was insured by the Company's brokerage firm through the Customer Asset Protection Company ("CAPCO"). CAPCO would cover losses in the event of the financial failure and liquidation of the financial institution that houses the Company's institutional money market investments, however does not ensure against losses due to market fluctuations. As of December 31, 2010 there were no amounts in money market accounts at brokerage firms in excess of SIPC.

The Company currently has two products, both using Plasma Rich Platelet (PRP) technology, that are presently marketed. Significant changes in technology could lead to new products or services that compete with the product offered by the Company. These changes could materially affect the price of the Company's product or render it obsolete. The Company outsources manufacturing for all the components of its offerings.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

While the Company utilizes single suppliers for several components of the Angel® and AutoloGel™ offering, most components are readily available on the open market and therefore no dependency exists. The one exception is a reagent, bovine thrombin, available exclusively through King Pharmaceuticals, with whom the Company has an established vendor relationship.

Cash Equivalents

The Company considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents.

Accounts and Royalties Receivable

Cytomedix generates accounts receivable from the sale of its products. Cytomedix provides for a reserve against receivables for estimated losses that may result from a customer's inability or unwillingness to pay. The allowance for doubtful accounts is estimated primarily based upon historical write-off percentages, known problem accounts, and current economic conditions. Accounts are written off against the allowance for doubtful accounts when the Company determines that amounts are not collectable. Recoveries of previously written-off accounts are recorded when collected. Royalties receivable represent current royalties earned on sales of covered product by licensees.

Inventory

Inventory is stated at the lower of cost or net realizable value. Inventory consists primarily of finished goods. Cost is determined on a first-in-first-out basis. The Company's primary product is the Angel® Processing set which has a shelf life of three years. The Company also maintains an inventory of kits, reagents, and other disposables that have shelf lives that generally range from ten months to five years. Expired products are segregated and used for demonstration purposes only; the Company writes off expired inventory through cost of sales.

Property and Equipment

Property and equipment is stated at cost less accumulated depreciation and is depreciated, using the straight-line method, over their estimated useful lives ranging from three to five years for all assets except for furniture and manufacturing equipment which is depreciated over seven and ten years, respectively. Maintenance and repairs are charged to operations as incurred. When assets are disposed of, the cost and related accumulated depreciation are removed from the accounts and any gain or loss is included in other income and expense.

Centrifuges may be sold, leased, or placed at no charge with customers. They are stated at cost less accumulated depreciation and are depreciated, using the straight-line method, over their estimated useful lives of three to five years. Maintenance and repairs are charged to operations as incurred. Depreciation expense for centrifuges that are available for sale, leased, or placed at no charge with customers are charged to cost of sales. Depreciation expense for centrifuges used for sales and marketing and other internal purposes are charged to operations. When the centrifuges are sold the net book value is charged to cost of sales.

Intangible Assets

The Company capitalizes the costs of purchased patents, trademarks, customer, and technology related intangibles. These intangibles are amortized via the straight-line method over their estimated useful lives. The Company accounts for finite-lived intangibles under FASB ASC 350, *Intangibles — Goodwill and Other*, and therefore reviews the recoverability of long-lived and finite-lived intangible assets when circumstances indicate that the carrying amount of assets may not be recoverable.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

The Company follows the guidance of FASB ASC 350, *Intangibles — Goodwill and Other*, with regard to its indefinite-lived intangibles. ASC 350 requires that goodwill be assessed at least annually for impairment by applying a fair value based test. The Company conducts this test as of October 1 of each year. As of October 1, 2010 we determined that there was no impairment. In the event that our analysis indicates an impairment, the Company would record an impairment loss, based on the fair value of the assets. Since the date of our fair value test their have been no triggering events requiring the need to update our impairment test.

Income Taxes

The Company accounts for income taxes under the liability method, which requires companies to account for deferred income taxes using the asset and liability method. Under the asset and liability method, current income tax expense or benefit is the amount of income taxes expected to be payable or refundable for the current year. A deferred income tax asset or liability is recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax credits and loss carryforwards. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Tax rate changes are reflected in income during the period such changes are enacted.

At December 31, 2010, we have accumulated U.S. federal and state net operating tax losses that are available to offset future taxable income and reduce future federal and state income taxes during the carryforward period. The utilization of available losses depends on the generation of future taxable income to absorb the losses. We may not be able to use available losses within the carryforward period. In addition, based on generally accepted accounting principles, we have determined for financial accounting and reporting purposes that it is unlikely that we will be able to apply or use the available losses to reduce future federal or state income taxes during the carryforward period. This assessment is updated annually or more frequently based on changes in circumstances.

A valuation allowance is recorded against deferred tax assets when it is more likely than not that a tax benefit will not be realized. The assessment for a valuation allowance requires judgment on the part of management with respect to the benefits that may be realized. The Company has concluded, based upon available evidence, it is more likely than not that the U.S. federal, state, and local deferred tax assets at December 31, 2010, will not be realized. For the year ended December 31, 2010, the income tax provision relates exclusively to a deferred tax liability associated with the amortization of goodwill. No further provision was recorded as a full valuation allowance has been provided against U.S. federal, state, and local deferred tax assets. The valuation allowance will be reversed at such time that realization is believed to be more likely than not. The Company has analyzed filing positions in all of the federal and state jurisdictions where it is required to file income tax returns, as well as all open tax years in these jurisdictions. The only periods subject to examination for the Company's federal return are the 2003 through 2010 tax years. The Company believes that its income tax filing positions and deductions would be sustained on audit and does not anticipate any adjustments that would result in a material change to its financial position. Therefore, no reserves for uncertain income tax positions have been recorded.

The Company's policy for recording interest and penalties associated with audits is to record such items as a component of income before taxes. There were no such items during the periods covered in this report.

Revenue Recognition

The Company recognizes revenue in accordance with FASB ASC 605,*Revenue Recognition*. ASC 605 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services rendered; (3) consideration is fixed or determinable; and (4) collectibility is reasonably assured.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

With the acquisition of the Angel® business, the Company acquired various customer agreements. Some of these agreements are for sales of disposable processing sets and supplies to existing customers, and the remaining agreements combine the (i) usage or leasing of blood separation processing equipment, (ii) maintenance of processing equipment, and (iii) purchase of disposable processing sets and supplies.

Revenue from sales of disposable processing sets and supplies is recognized upon shipment of products to the customers. The Company does not maintain a reserve for returned products as in the past those returns have been negligible.

In regards to those agreements that combine the usage of the blood separation processing equipment with the sale of disposable processing sets and supplies and maintenance, the consideration is allocated to the various elements in accordance with the guidance for multiple element arrangements under ASC 605 — Revenue recognition. Based on the terms contained in the agreements, any payments under these agreements are contingent on the customer ordering additional disposable processing sets and supplies, and the customers are not required to purchase any minimum guaranteed quantity of products during the term of the agreements. The usage of the blood separation processing equipment is accounted for as an operating lease in accordance with ASC 840 — Leases, and as result of payments being contingent upon the ordering by the customer of new products, any rental income is recorded following the contingent rental method when rental income is earned and collectability is reasonably assured. The sale of disposable processing sets and supplies and maintenance are deemed a combined unit of accounting because the Company does not have objective and reliable evidence of fair value of the maintenance component on the arrangement. However, since (a) any consideration for disposable processing sets and supplies and maintenance is contingent upon the customer ordering additional disposable processing sets and supplies and (b) both the disposable products and maintenance services are provided over the same term, the Company recognizes revenue for this combined unit of accounting following the contingent revenue method at the time disposable products are delivered based on prices contained in the agreement. Rental income is currently less than 10% of total revenue and the Company therefore does not make separate disclosure in the statement of operations.

Percentage based fees on licensee sales of covered products are generally recorded as products are sold by licensees and are reflected as Revenues in the Royalties line of the Consolidated Statements of Operations. Under certain agreements, Cytomedix has received lump sum payments. If the lump sum payment is deemed to be an inducement to enter into an agreement, and is applicable to some future period, then this amount is recorded as deferred revenue and amortized to revenue on a straight line basis over the course of the agreement.

Direct costs associated with product sales and royalty revenues are recorded at the time that revenue is recognized.

Stock-Based Compensation

The Company, from time to time, may issue compensatory stock options or shares to employees, consultants, and other service providers under its Long-Term Incentive Plan (“LTIP”) (see Note 17). In some cases, it has issued compensatory warrants to service providers outside the LTIP (see Note 17). The Company issues new shares of its Common stock when employees or service providers exercise options or warrants.

The Company adopted FASB ASC 718, *Compensation — Stock Compensation*, as of January 1, 2006, using the modified prospective application. Under this method, all equity-based compensation awarded after the adoption date has been determined under the fair value provisions of ASC 718. This compensation is then expensed over the vesting period of the underlying award. Additionally, for all equity-based compensation awarded prior to the adoption date, compensation for the portion of awards for which the requisite service is performed after the adoption date is recognized as service is rendered.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

The fair value of each option award to employees and directors is estimated on the date of grant using the Black-Scholes-Merton option-pricing formula ("Black-Scholes model"). The weighted-average assumptions used in the model are summarized in the following table:

	2010	2009
Risk free rate	1.96%	2.05%
Expected years until exercise	6.0	5.8
Expected stock volatility	143%	141%
Dividend yield	—	—

For employee and director options, expected volatilities are based on historical volatility of the Company's stock. Due to the Company's short operating history, it uses peer company data to estimate option exercise and employee termination within the valuation model. The expected years until exercise represents the period of time that options are expected to be outstanding and was estimated by using peer company information. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The Company estimated that the dividend rate on its Common stock will be zero. The fair value of compensatory options or warrants issued to service providers utilizes the same methodology with the exception of the expected term. For these awards to non-employees, the Company estimates that the options or warrants will be held for the full term.

Stock-based compensation for awards granted to non-employees is periodically remeasured as the underlying options and warrants vest. The Company recognizes an expense for such awards throughout the performance period as the services are provided by the non-employees, based on the fair value of these options and warrants at each reporting period.

The Company estimates the fair value of stock issuances based on the closing market value of the Company's stock on the date of grant.

Loss Per Share

Loss per share is calculated in accordance with FASB ASC 260,*Earnings Per Share*. Basic loss per share is computed based upon the weighted average number of shares of Common stock outstanding for the period and excludes any potential dilution. Diluted earnings per share reflects potential dilution from the exercise of securities into Common stock. Outstanding options and warrants to purchase Common stock and the Common stock equivalents of convertible preferred stock are not included in the computation of diluted earnings per share because the effect of these instruments would be anti-dilutive (i.e. would reduce the loss per share). The Common shares potentially issuable upon the exercise of these instruments were as follows at December 31:

	2010	2009
Options	5,323,054	4,616,554
Warrants	11,668,364	7,058,972
Series A Preferred Stock	32,554	32,554
Series B Preferred Stock	21,928	21,928
Series D Preferred Stock	7,494,492	—
	24,540,392	11,730,008

Defined Contribution Plans

The Company sponsors a defined contribution plan under Section 401(k) of the Internal Revenue Code covering substantially all full-time U.S. employees. Employee contributions are voluntary and are determined on an individual basis subject to the maximum allowable under federal tax regulations. Participants are always fully vested in their contributions. Beginning in 2007, the Company modified its plan and began making

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

employer matching contributions, which also vest immediately. This plan is designated as a “Safe Harbor” plan. During 2010 and 2009, the Company contributed approximately $55,000 and $47,000 in cash to the plan.

Fair Value of Financial Instruments

The Company accounts for its financial instruments at fair value in accordance with U.S. GAAP. Fair value is the price that would be received from the sale of an asset or paid to transfer a liability assuming an orderly transaction in the most advantageous market at the measurement date. U.S. GAAP establishes a hierarchical disclosure framework which prioritizes and ranks the level of observability of inputs used in measuring fair value. These tiers include:

- Level 1, defined as observable inputs such as quoted prices in active markets for identical assets;
- Level 2, defined as observable inputs other than Level I prices such as quoted prices for similar assets; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

An asset's or liability's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. At each reporting period, we perform a detailed analysis of our assets and liabilities that are measured at fair value. All assets and liabilities for which the fair value measurement is based on significant unobservable inputs or instruments which trade infrequently and therefore have little or no price transparency are classified as Level 3.

The Company accounts for derivative financial instruments under ASC 815,*Accounting for Derivative Instruments and Hedging Activities*, as amended and interpreted. ASC 815 requires that we recognize all derivatives on the balance sheet at fair value. Certain warrants issued in 2009 and prior years meet the definition of derivative liabilities. In addition, in October 2010, we executed an equity transaction in which detachable stock purchase warrants were sold. These warrants also contain characteristics that meet the definition of a derivative liability and will be adjusted to fair value using the Black-Scholes model. This model determines fair value by requiring the use of estimates that include the contractual term of the warrant, expected volatility of the Company’s stock price, expected dividends and the risk-free interest rate. Changes in fair value are classified in Other income (expense) in the consolidated statement of operations at every balance sheet date.

Additional information regarding fair value is disclosed in Note 5.

Recent Accounting Pronouncements

In October 2009, the FASB issued ASU No. 2009-13, Multiple-Deliverable Revenue Arrangements, or ASU 2009-13, which amends existing revenue recognition accounting pronouncements that are currently within the scope of FASB ASC 605, Revenue Recognition. This guidance eliminates the requirement to establish the fair value of undelivered products and services and instead provides for separate revenue recognition based upon management’s estimate of the selling price for an undelivered item when there is no other means to determine the fair value of that undelivered item. ASU 2009-13 is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

In December 2010, the FASB issued ASU No. 2010-28, Intangibles — Goodwill and Other, or ASU 2010-28, which amends the goodwill impairment test outlined in FASB ASC 350. This guidance modifies Step 1 of the

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 — Summary of Significant Accounting Policies – (continued)

goodwill impairment test for reporting units with zero or negative carrying amounts. For those reporting units, an entity is required to perform Step 2 of the goodwill impairment test if it is more likely than not that a goodwill impairment exists. In determining whether it is more likely than not that a goodwill impairment exists, an entity should consider whether there are any adverse qualitative factors indicating that an impairment may exist. ASU 2009-28 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2010. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

In January 2010, the FASB issued ASU No. 2010-06, *Fair Value Measurements and Disclosures*, or ASU 2010-06. This update requires new disclosures of transfers in and out of Levels 1 and 2 and of activity in Level 3 fair value measurements. The update also clarifies the existing disclosures for levels of disaggregation and about inputs and valuation techniques. ASU 2010-06 is effective for interim and annual reporting periods beginning after December 15, 2009, except for the disclosures about purchases, sales, issuances, and settlements in the roll-forward of activity in Level 3 fair value measurements. These disclosures are effective for fiscal years beginning after December 15, 2010, and for interim periods within those fiscal years. The Company is currently evaluating the impact, if any, that the adoption of this amendment will have on its financial statements.

Note 4 — Acquisition

Overview

On April 9, 2010, Cytomedix, through its wholly owned subsidiary, and Sorin entered into an Asset Purchase Agreement (the “Agreement”) pursuant to which Cytomedix agreed to buy all title and interest in certain assets of and assume certain liabilities in Sorin’s operation of the Angel® and ActivAT® product lines (including the whole blood separation system, the blood processing kit and blood accessing kit) (the “Business Assets” or “Angel® Business”). The Angel® System is a device that utilizes validated blood separation technology to separate platelets and plasma from other components of a patient’s blood. The device provides the necessary flexibility and sophistication for more complex clinical situations. The ActivAT® technology facilitates the preparation of autologous human thrombin and currently is sold in Europe and Canada. The Angel® Business acquired from Sorin will provide Cytomedix with immediate access to surgical markets. By acquiring the Angel® Business, Cytomedix became the only supplier of PRP technology with FDA cleared indications for topical use and surgical use.

Pursuant to the terms of the Agreement, in consideration for the sale of the Business Assets, Cytomedix will pay to Sorin an aggregate amount equal to $7 million, to be paid as follows: (i) $2 million paid on the closing date of the transaction, April 9, 2010 (the “Closing Date”), and (ii) $5 million to be paid in accordance with a Secured Promissory Note in the principal amount of $5 million with interest accruing at 2.7% per annum (the “Promissory Note”) (see Note 14).

Sorin and Cytomedix made customary representations and warranties in the Agreement. Sorin also agreed to various covenants in the Agreement, including, to provide Cytomedix access to the books and records and other relevant information relating to the Business Assets. In addition, Cytomedix is entitled to set-off against deferred payments owed to Sorin for the amount of losses that the Company, in good faith, believes are owed under the indemnification provisions under the Agreement. The amount of such set-off will bear an 8% interest rate per annum from the date of exercise of set-off until the date that any amount improperly set-off is paid by Cytomedix, subject to a $500,000 cap on such set-off right.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 4 — Acquisition – (continued)

Purchase Price

The following table summarizes the purchase price for the acquisition of the Angel® business:

Cash paid upon closing	$ 2,000,000
Promissory note, net of discount[(1)]	4,008,858
Total costs of acquisition	$ 6,008,858

(1) Reflects net present value of payment stream under promissory note, discounted at 18% presumed borrowing rate.

Purchase Price Allocation

The Company assessed the fair value of assets acquired and the liabilities assumed. The following table summarizes the allocation of the purchase price based on the fair value of the acquired assets and assumed liabilities:

Inventory	$ 1,151,035
Intangibles	3,383,000
Property and equipment	768,000
Net assets acquired	$ 5,302,035
Excess of costs of acquisition over net assets acquired	$ 706,823

Under purchase accounting rules, Cytomedix revalued the acquired finished goods inventory to fair value, which is defined as the estimated selling price less the sum of (a) costs of disposal and (b) a reasonable profit allowance for Cytomedix's selling effort. Cytomedix revalued the acquired property and equipment using the cost approach which is based on the amount required to replace similar assets.

Certain trademarks, technology and customer relationships of the Angel® Business have been recorded as intangible assets. The trademarks and technology are estimated to have useful lives of fifteen years while the customer relationships are estimated to have a useful life of eight years. All of these assets are being amortized on a straight-line basis as this is the most reliable representation of how the economic benefits of the assets are realized. Amortization expense of technology intangible assets is classified as cost of sales while all other intangible asset amortization is classified as general and administrative expense.

Goodwill represents the purchase price in excess of the amounts assigned to acquired tangible or intangible assets and assumed liabilities. Amounts allocated to goodwill are tax deductible in all relevant jurisdictions. The goodwill is attributable to the synergies expected to arise as a result of the acquisition.

The Company incurred approximately $230,000 of acquisition related expenses, which were included in general and administrative expense in the Company's statement of operations. Of this amount, $170,000 was incurred in the fourth quarter of 2009 and $60,000 was incurred in the first quarter of 2010.

The following unaudited pro forma financial information summarizes the results of operations for the periods indicated as if the Acquisition had been completed as of January 1, 2009. Revenue specific to the Angel® Business since the April 9, 2010 acquisition was $3,422,000. As Cytomedix has begun to integrate the combined operations, eliminating overlapping processes and expenses and integrating its products and sales efforts with those of the Angel® Business, it is impractical to determine the earnings specific to the Angel® Business since the acquisition date.

These pro forma amounts do not purport to be indicative of the results that would have actually been obtained if the acquisition occurred as of January 1, 2009 or that may be obtained in the future.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 4 — Acquisition – (continued)

Unaudited Pro Forma Information

	Year Ended December 31, 2010	Year Ended December 31, 2009
Revenue	$ 5,017,033	$ 6,720,776
Net loss	$(6,632,355)	$(2,832,338)

Pro forma information primarily reflects adjustments relating to interest on the Promissory Note and amortization of intangibles acquired in the Acquisition.

Note 5 — Fair Value Measurements

The Company has certain derivative liabilities related to stock purchase warrants that are valued using Level 3 inputs. The change in fair value of the derivative liabilities is classified in other income (expense) in the Company's statement of operations. The fair value of the Company's derivative liabilities related to stock purchase warrants was determined using the Black-Scholes model — a Level 3 input.

The following table sets forth a summary of changes in the fair value of Level 3 liabilities for years ended December 31, 2010 and 2009:

Description	Balance at beginning of year	Exercise of Outstanding Warrants	Cumulative Effect of Adoption of New Accounting Guidance	Additional Issuances and Repricing Due to Anti-Dilution Provisions	Change in Fair Value	Balance at end of year
Derivative liabilities:						
2010	$ 623,853	$(232,564)	$ —	$ 848,845	$ 572,313	$1,812,447
2009	$ —	$ —	$ 128,121	$ 686,620	$(190,888)	$ 623,853

Transaction costs of approximately $158,000 allocated to these warrants were recorded as deferred charges at the time of issuance. The deferred charges are amortized on a straight-line basis over the contractual term of the warrants and recorded in other expense on the statement of operations. As of December 31, 2010, the current and non-current balance of the unamortized deferred costs relating to these warrants are approximately $30,000 and $109,000, respectively. The remaining portion of unamortized deferred costs at December 31, 2010 relate to deferred debt issuance costs associated with the note payable, as discussed in Note 14.

In October 2010, the Company purchased a Certificate of Deposit ("CD") from its commercial bank in the amount of $52,800. This CD bears interest at an annual rate of 0.50% and matures on June 24, 2011. The $52,800 carrying value of the CD approximates its fair value. This CD collateralizes the Letter of Credit described in Commitment and Contingencies (see Note 20).

The Company does not have any non financial assets or liabilities that it measures at fair value.

Note 6 — Patent Settlement and License Agreements

In 2005, 2006, and 2007 the Company identified and successfully pursued numerous companies that either marketed or sought to market products similar to the AutoloGel™ System, that the Company believed were infringing, inducing infringement of, or would infringe its intellectual property rights. Settlements were achieved and/or licenses were granted to these companies resulting in a royalty stream for Cytomedix. Royalties generated from these licensing agreements, as well as the related costs, are separately disclosed in the Consolidated Statements of Operations as "Royalties" and "Cost of royalties," respectively. These license agreements, and the revenue streams associated therewith, have since terminated as the underlying patents expired in November 2009, with only final closeout adjustments being recorded in 2010.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 7 — Royalty Agreements

The Company was party to a Royalty Agreement with Curative Health Services, Inc. Under this agreement as amended, Curative was due 92% of licensing receipts from DePuy Spine, Inc. (a division of Johnson & Johnson, Inc.) and 10% of the total other amounts received by the Company in connection with upfront, milestone and other similar payments relating to the patents it acquired from Curative. On the Consolidated Statements of Operations, these costs are reflected in the Cost of royalties line. The related payables are included in Accounts payable and accrued expenses on the Balance Sheet. The DePuy and other license agreements concluded in November 2009, simultaneous with the expiration of the underlying patents, with only final close out adjustments being recorded in 2010. The Company currently has no further income relating to the Curative patents on which it would owe a royalty.

The Company is also party to a Royalty Agreement with Mr. Charles Worden. Under this agreement, the Company is to pay Mr. Worden a royalty equal to 5% of gross profit on sales relying on certain patents, subject to a $6,250 minimum payment per month and a limit of $600,000 during any calendar year. This agreement also provides Mr. Worden with a security interest and lien in the patent as well as a reversionary interest if the Company discontinues substantially all efforts to commercialize the Worden Patent.

Note 8 — Receivables

Accounts and royalties receivable, net consisted of the following at December 31:

	2010	2009
Trade receivables	$ 578,936	$ 68,171
Due from Sorin Group USA, net	637,132	—
Royalty receivables	—	131,715
Other receivables	26,476	929
	1,242,544	200,815
Less allowance for doubtful accounts	(35,517)	(20,255)
	$1,207,027	$ 180,560

The Due from Sorin Group USA, net relates to supply chain activity occurring during the transition period.

The following table reflects the approximate change in allowance for doubtful accounts.

	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions[1]	Balance at End of Period
Year Ended December 31, 2010				
Allowance for doubtful accounts	$ 20,000	$ 24,000	$ (8,000)	$ 36,000
Year Ended December 31, 2009				
Allowance for doubtful accounts	$ 26,000	$ 20,000	$ (26,000)	$ 20,000

(1) Reflects receivables written-off as uncollectible.

Note 9 — Inventory

Inventory consisted of the following at December 31:

	2010	2009
Raw materials	$ 63,940	$ —
Finished goods	564,044	25,986
	$ 627,984	$ 25,986

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 10 — Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following at December 31:

	2010	2009
Prepaid insurance	$ 104,806	$ 99,998
Prepaid fees and rent	24,929	12,061
Deposits and advances	418,808	28,686
Other Current Assets	61,866	—
	$ 610,409	$ 140,745

Deposits and advances consist primarily of payments to the Company's raw materials suppliers and Angel® centrifuge manufacturers. Other Current Assets is exclusively made up of parts used to refurbish the Angel® centrifuges.

Note 11 — Property and Equipment

Property and equipment consisted of the following at December 31:

	2010	2009
Medical equipment	$1,291,107	$ 112,406
Office equipment	73,927	46,562
Manufacturing equipment	255,685	—
	1,620,719	158,968
Less accumulated depreciation	(295,723)	(74,345)
	$1,324,996	$ 84,623

Medical equipment, whose accumulated depreciation was approximately $225,000 and $42,000 at December 31, 2010 and 2009, respectively, primarily represents centrifuges that are leased or held for lease.

Depreciation expense was approximately $240,000 and $33,000 for the years ended December 31, 2010 and 2009, respectively. The net book value of property and equipment disposed during was $62,000 in 2010 and nominal in 2009.

Note 12 — Goodwill and Identifiable Intangible Assets

Goodwill

As a result of its acquisition of the Angel® Business, Cytomedix recorded goodwill of approximately $707,000. The table below sets forth the changes in the carrying amount of goodwill for the period indicated:

Balance as of January 1, 2010	$ —
Increase in goodwill due to acquisition	706,823
Balance as of December 31, 2010	$ 706,823

Prior to the acquisition of the Angel® Business, the Company had no goodwill. It is the Company's policy to conduct an impairment test of goodwill on an annual basis as of October 1 of each year. The Company will also conduct tests if events occur or circumstances change that would, more likely than not, reduce the fair value of the Company below its carrying value. The Company determined that there was no impairment per its test as of October 1, 2010 and no such triggering events were identified during the quarter ended December 31, 2010.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 12 — Goodwill and Identifiable Intangible Assets – (continued)

Identifiable Intangible Assets

Cytomedix's identifiable intangible assets consist of trademarks, technology (including patents), and customer relationships. These assets were a result of the Angel® Business acquisition. Those intangible assets, and the associated amortization, are as follows:

	2010
Trademarks	$ 320,000
Technology	2,355,000
Customer relationships	708,000
Total	$3,383,000
Less accumulated amortization	(200,125)
	$3,182,875

Cytomedix reevaluates the recoverability of its identifiable, definitive lived intangible assets when changes in circumstances indicate the asset's value may be impaired. If such indicators are identified the Company then would evaluate the assets to determine the amount of such impairment, if any. No such indicators have been identified since the acquisition. Amortization expense of approximately $118,000 was recorded to cost of sales and approximately $82,000 was recorded to general and administrative expense in the year ended December 31, 2010. Annual amortization expense based on our existing intangible assets and their estimated useful lives is expected to be approximately:

2011	$ 267,000
2012	$ 267,000
2013	$ 267,000
2014	$ 267,000
2015	$ 267,000
Thereafter	$1,849,000

Note 13 — Accounts payable and accrued expenses

Accounts payable and accrued expenses consisted of the following at December 31:

	2010	2009
Trade payables	$1,096,799	$ 185,483
Due to Sorin Group Italia Srl, net	1,859,060	—
Accrued compensation and benefits	152,253	216,179
Accrued professional fees	100,000	364,886
Accrued royalty fees	—	261,964
Accrued interest	157,598	—
Other payables	192,451	9,382
	$3,558,161	$1,037,894

The Due to Sorin Group Italia Srl, net balance is comprised of logistical costs related to the sale of the Angel® and ActivAT® products that were incurred and the cost of additional Angel® and ActivAT® inventory that was purchased or manufactured by Sorin during the transition period. These costs are repayable by the Company to Sorin Group.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 14 — Note Payable

In conjunction with the Acquisition Agreement entered into with Sorin and as part of the consideration (see Note 4) the Company executed a $5 million Promissory Note. The Promissory Note accrues interest at 2.7% per annum and is secured by a first priority security interest on the Business Assets acquired. The payment on the Promissory Note are payable as follows: (i) installments of $800,000 each on the 6 and 12 month anniversaries of the Promissory Note, (ii) installments of $1,200,000 each on the 18 and 24 month anniversaries of the Promissory Note, and (iii) an installment of $1,000,000 on the 30 month anniversary of the Note. In the event of default, the initial rate of interest on the Promissory Note will increase from 2.7% to 4% per annum. This Promissory Note may be prepaid at any time without premium or penalty. A portion of the foregoing payment obligations of the Company are guaranteed by certain guarantors as described below. The Promissory Note contains other terms and provisions that are customary for instruments of this nature. In 2010, the Company paid approximately $361,000 in stated and imputed interest.

In conjunction with the Acquisition, certain existing shareholders of the Company (the “Guarantors”) executed guaranty agreements pursuant to which such Guarantors agreed to guaranty 50% of the first $4 million payable to Sorin under the promissory note (the “Guaranty Agreements”). In connection with the foregoing guaranties, the Company agreed to provide the following consideration to the Guarantors: (i) cash fee calculated as a percentage of the amount guaranteed (the “Cash Fee”) and (ii) 5 year warrants to purchase an aggregate 1,333,334 shares of Common stock of the Company at an exercise price of $0.5368 per share. These warrants were valued at approximately $655,000, were capitalized as deferred debt issuance costs and are being amortized to interest expense on a straight-line basis over the two year guarantee period. The Company determined that the straight line method of amortization did not yield a materially different amortization schedule from the effective interest method. At December 31, 2010, the short and long-term portions of the unamortized deferred costs related to the note were $328,000 and $82,000, respectively.

Note 15 — Income Taxes

Income tax benefit (expense) for the years ended December 31, 2010 and 2009 consisted of the following:

	2010	2009
Current:		
Federal	$ —	$ —
State	—	—
Deferred:		
Federal	133,000	58,000
State	(25,000)	3,000
Net operating loss carryforward	2,023,000	1,274,000
Valuation allowance	(2,145,000)	(1,335,000)
Total income tax (expense) benefit	$ (14,000)	$ —

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 15 — Income Taxes – (continued)

Significant components of Cytomedix's deferred tax assets and liabilities consisted of the following at December 31:

	2010	2009
Deferred tax assets:		
Stock-based compensation	$ 3,849,000	$ 3,727,000
Amortization of patents	89,000	108,000
Tax deductible Goodwill	371,000	—
Other	71,000	52,000
Total deferred tax assets	4,380,000	3,887,000
Deferred tax liabilities:		
Discount on Note Payable	(224,000)	—
Other	(14,000)	—
Total deferred tax liabilities	(238,000)	—
Net deferred tax assets	4,142,000	3,887,000
Net operating loss carryforwards	14,178,000	12,155,000
	18,320,000	16,042,000
Less valuation allowance	(18,334,000)	(16,042,000)
Total deferred tax assets (liabilities)	$ (14,000)	$ —

The following table reflects the change in the valuation allowance for deferred tax assets at December 31:

	Balance at Beginning of Period	Charged to Costs and Expenses	Balance at End of Period
Year Ended December 31, 2010			
Valuation allowance for deferred tax assets	$16,042,000	$ 2,292,000	$ 18,334,000
Year Ended December 31, 2009			
Valuation allowance for deferred tax assets	$14,707,000	$ 1,335,000	$ 16,042,000

The total deferred tax assets include $147,000 recorded to goodwill. An equal and offsetting entry was recorded to increase the valuation allowance for this change.

The following table presents a reconciliation between the U.S. federal statutory income tax rate and the Company's effective tax rate:

	2010	2009
U.S. Federal statutory income tax	35.0%	35.0%
State and local income tax benefits	3.2%	3.8%
Non deductible change in fair value of derivatives	(3.0%)	—
Non deductible guarantee fees	(1.4%)	—
Other	0.2%	—
Valuation allowance for deferred income tax assets	(33.8%)	(38.8%)
Effective income tax rate	0.2%	0.0%

The Company had loss carryforwards of approximately $36,958,000 as of December 31, 2010 that may be offset against future taxable income. The carryforwards will expire between 2021 and 2030. Utilization of these carryforwards may be subject to annual limitations based upon previous significant changes in stock ownership. Management has determined that realization of the net deferred tax assets is not assured and accordingly has established a valuation allowance of $18,334,000 and $16,042,000 at December 31, 2010 and 2009, respectively.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 15 — Income Taxes – (continued)

In 2010, the Company recorded an income tax provision of $14,000 related to a deferred tax liability resulting from the amortization of Goodwill.

The Company's source of income before expenses is primarily domestic.

The Company does not believe it has any uncertain income tax positions as described in its discussion of Income Tax accounting policy in Note 3.

Note 16 — Capital Stock

The Company has several classes of stock as described below.

Common Stock

Common stock has a par value of $.0001 per share and is limited to a maximum of 100,000,000 shares. It is subordinate to Series A, B, C, and D Convertible Preferred stock and to all other classes and series of equity securities of the Company which by their terms rank senior to it, in the event of a liquidation, dissolution, or winding up of the Company or with regard to any other rights, privileges or preferences. Each share of Common stock represents the right to one vote. Holders of Common stock are entitled to receive dividends as may be declared by the Board of Directors, subject to the limitations in the terms of the Series A, B, C, and D Convertible Preferred stock described below.

Series A Convertible Preferred Stock

Series A Convertible Preferred stock ("Series A") has a par value of $.0001 per share and is limited to a maximum of 5,000,000 shares. It has a stated liquidation preference of $1.00 per share and preference over and rank senior to (i) Series B Convertible Preferred stock, (ii) Common stock, and (iii) all other classes and series of equity securities of the Company which by its terms do not rank senior to the Series A stock. The Series A contains a negative covenant prohibiting the Company from granting any security interest in the Company's patents and/or future royalty streams ("Intellectual Property"). The holders of record of shares are entitled to receive cumulative dividends at the rate of 8% of the stated liquidation preference amount per share per annum, payable quarterly in arrears. These dividends are prior and in preference to any declaration or payment of any distribution on any outstanding shares of Common stock or any other equity securities of the Company ranking junior as to the payment of dividends. Dividends are to be paid in shares of Series A or, in the sole discretion of the Board of Directors, in cash. Each share of Series A stock shall entitle the holder thereof to vote on all matters voted on by holders of Common stock of the Company voting together as a single class with the other shares entitled to vote.

Each share of Series A stock may be converted into Common stock at a conversion rate equal to 90% of the twenty-day average closing price of the Company's Common stock, but in no case shall this price be less than $3.00 per share. The Company may redeem Series A stock for cash at a price per share equal to 104% of the liquidation preference amount plus all accrued but unpaid dividends, by providing proper notice of not less than 10 days nor more than 60 days prior to a redemption date set by the Company.

Series B Convertible Preferred Stock

Series B Convertible Preferred stock ("Series B") has a par value of $.0001 per share and is limited to a maximum of 5,000,000 shares. It has a stated liquidation preference of $1.00 per share, is subordinate to the Series A stock, and has preference over and ranks senior to (i) Common stock, and (ii) all other classes and series of equity securities of the Company which by its terms do not rank senior to the Series B stock. The Series B contains a negative covenant prohibiting the Company from granting any security interest in the Company's Intellectual Property. The holders of record of shares are entitled to receive cumulative dividends at the rate of 8% of the stated liquidation preference amount per share per annum, payable quarterly in arrears. These dividends are prior and in preference to any declaration or payment of any distribution on any outstanding shares of Common stock or any other equity securities of the Company ranking junior as to the

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

payment of dividends. Dividends are to be paid in shares of Series B or, in the sole discretion of the Board of Directors, in cash. Each share of Series B stock shall entitle the holder thereof to vote on all matters voted on by holders of Common stock of the Company voting together as a single class with the other shares entitled to vote.

Each share of Series B stock may be converted into Common stock at a conversion rate equal to 90% of the twenty-day average closing price of the Company's Common stock, but in no case shall this price be less than $3.00 per share. The Company may redeem Series B stock for cash at a price per share equal to 103% of the liquidation preference amount plus all accrued but unpaid dividends, by providing proper notice of not less than 10 days nor more than 60 days prior to a redemption date set by the Company.

Series C Convertible Preferred Stock

Series C Convertible Preferred stock ("Series C") has a par value of $.0001 per share and is limited to a maximum of 1,000 shares. It has a stated liquidation preference of $10,000 per share, and ranks junior to the Series A regarding distributions upon liquidation of the Company. Series C stock ranks junior to the Series B solely with respect to the priority security interest in the Company's Intellectual Property. The shares accrued dividends at 6% of the stated liquidation preference amount from the date of issuance and increased to 8% commencing on September 25, 2005, and were payable annually in cash or shares of Common stock at the option of the Company. The Series C stock ranks pari passu with Series A and Series B with respect to payment of dividends. As of December 31, 2010 and 2009, no Series C remained outstanding.

Series D Convertible Preferred Stock

The Company's Board designated 2,000,000 shares of the preferred stock as the 10% Series D Convertible Preferred Stock (the "Preferred Stock") with a stated value of $1,000 per share. The Preferred Stock earns cumulative dividends at the rate of 10% per annum, payable quarterly in cash in arrears on January 15, April 15, July 15 and October 15, beginning on July 15, 2010, or, in the Company's sole discretion, in shares of common stock valued at the 5-day volume weighted average price ending 3 days immediately preceding the dividend due date, but in no case at a price less than $0.40 per share. The Preferred Stock may be converted, at the holder's option, into shares of common stock at a conversion price equal to $0.4392. Upon any liquidation, dissolution or winding-up of our company, whether voluntary or involuntary, the holders will be entitled to receive out of the Company's assets an amount equal to the stated value, plus any accrued and unpaid dividends thereon and any other fees then due and owing thereon, for each share of Preferred Stock before any distribution or payment is made to the holders of any junior securities. The holders of the Preferred Stock can vote their shares on a "one share one vote" basis. At any time after the third anniversary of the issuance date, the Company may redeem some or all of the then outstanding Preferred Stock, for cash equal to 100% of the aggregate stated value and accrued but unpaid dividends. The Preferred Stock also provides that with limited exceptions as discussed below, in no event will the Company effect any conversion of the Preferred Stock and the holder of the Preferred Stock will not have the right to convert the Preferred Stock, to the extent that such conversion would result in beneficial ownership by the holder of the Preferred Stock and its affiliates in excess of 9.99% of the then outstanding shares of common stock (after taking into account the shares to be issued to the holder upon such conversion). The Preferred Stock holder may decrease the foregoing threshold upon 61 days' notice of such decrease to us. The Preferred Stock is not and will not be listed on any securities exchange or automated quotation system.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

Warrants and Options

The Company had the following outstanding warrants and options at December 31:

Equity Instrument	# Outstanding	
	December 31, 2010	December 31, 2009
D Warrants[1]	304,033	304,033
Unit Warrants[2]	—	1,812,500
Fitch/Coleman Warrants[3]	975,000	975,000
August 2008 Warrants[4]	1,000,007	1,000,007
August 2009 Warrants[5]	1,638,888	1,717,800
April 2010 Warrants[6]	4,128,631	—
Guarantor 2010 Warrants[7]	1,333,334	—
October 2010 Warrants[8]	1,863,839	—
Other warrants[9]	424,632	1,249,632
Options issued under the Long-Term Incentive Plan[10]	5,323,054	4,616,554

(1) These warrants were issued in May 2006 and are voluntarily exercisable at $3.50 per share, provided that the exercise does not result in the holder owning in excess of 9.9% of the outstanding shares of the Company's Common stock, and expire on May 1, 2011. The Company may call up to 100% of the class D warrants, provided that the Company's Common stock must have been trading at a closing price greater than $4.50 for a period of at least ten (10) consecutive trading days prior to the date of delivery of the Call Notice, provided that the Registration Statement is then in effect and trading in the Common stock shall not have been suspended by the Securities and Exchange Commission or the securities exchange or quotation system on which the Common stock is then listed or traded.

(2) The Unit warrants expired on March 31, 2010. The warrants were accounted for as derivative liabilities as of January 1, 2009.

(3) These warrants were issued in connection with the August 2, 2007 Term Sheet Agreement and Shareholders' Agreement with the Company's outside patent counsel, Fitch Even Tabin & Flannery and The Coleman Law Firm, and have a 7.5 year term. The strike prices on the warrants are: 325,000 at $1.25 (Group A); 325,000 at $1.50 (Group B); and 325,000 at $1.75 (Group C). The Company may call up to 100% of these warrants, provided that the closing stock price is at or above the following call prices for ten consecutive trading days: Group A — $4/share; Group B — $5/share; Group C — $6/share. If the Company exercises its right to call, it shall provide at least 45 days notice for one-half of the warrants subject to the call and at least 90 days notice for the remainder of the warrants subject to the call.

(4) These warrants were issued in connection with the August 2008 registered direct offering of Common stock and warrants, are voluntarily exercisable at $1.00 per share, provided that the exercise does not result in the holder owning in excess of 9.99% of the outstanding shares of the Company's Common stock, and expire on August 29, 2012.

(5) These warrants were issued in connection with the August 2009 financing (discussed later in this Note), are voluntarily exercisable at $0.58 per share and expire in February 2014. These amounts reflect adjustments for an additional 195,339 warrants due to anti-dilutive provisions. These warrants are accounted for as derivative liabilities.

(6) These warrants were issued in connection with the April 2010 Series D preferred stock offering, are voluntarily exercisable at $0.54 per share and expire on April 9, 2015.

(7) These warrants were issued pursuant to the Guaranty Agreements executed in connection with the Promissory Note payable to Sorin. These warrants have an exercise price of $0.54 per share and expire on April 9, 2015.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

(8) These warrants were issued in connection with the October 2010 registered direct offering of common stock. They have an exercise price of $0.60, expire on April 7, 2016, and are accounted for as derivative liabilities upon issuance and as of December 31, 2010. These warrants are accounted for as derivative liabilities.

(9) These warrants were issued to placement agents, consultants, and other professional service providers in exchange for services provided. They have terms ranging from 4 to 10 years with various expiration dates through February 24, 2014 and exercise prices ranging from $1.10 to $6.00. They are voluntarily exercisable once vested. There is no call provision associated with these warrants.

(10)These options were issued under the Company's shareholder approved Long-Term Incentive Plan. See Note 17 for a full discussion regarding these options.

Activity

The Company issued 6,830,115 shares of Common stock during 2010. The following table lists the sources of and the proceeds from those issuances:

Source	# of Shares	Total Proceeds
Conversion of series D convertible preferred shares	762,750	$ —
Exercise of August 2009 warrants	274,251	$ 165,703
Common stock issued in lieu of cash for dividend payable on Series D Convertible Preferred shares	371,927	$ —
Sale of shares pursuant to registered direct offering completed in Fourth Quarter 2010	3,727,677	$1,506,000
Sale of shares pursuant to October 2010 equity purchase agreement	1,350,000	$ 613,920
Common stock issued in lieu of cash for fees incurred pursuant to October 2010 equity purchase agreement	343,510	$ —
Totals	6,830,115	$2,285,623

The Company issued 3,311,005 shares of Common stock during 2009. The following table lists the sources of and the proceeds from those issuances:

Source	# of Shares	Total Proceeds
Conversion of series B convertible preferred shares	11,326	$ —
Sale of shares pursuant to registered direct offering completed in Third Quarter 2009	3,299,679	$1,490,057
Totals	3,311,005	$1,490,057

The Company has used the cash proceeds from these 2010 and 2009 issuances for general corporate purposes. The issuance of shares under the Company's LTIP were registered by the Company's Registration Statement on Form S-8 filed with the SEC on November 1, 2004 and subsequently amended on June 12, 2006, March 26, 2008, and September 25, 2009. All other offerings of the Company's securities were either registered under the Securities Act or made in reliance on the private offering exemptions contained in Section 4(2) of the Securities Act and regulations promulgated thereunder, and in reliance on similar exemptions under applicable state laws as a transaction not involving a public offering. None of these transactions involved any underwriters, underwriting discounts or commissions.

In 2010, the Company granted 733,000 options to purchase the Company's Common stock with exercise prices ranging from $0.47 to $0.61 under the LTIP (see Note 17).

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

On October 15, 2010, pursuant to the terms of the Certificate of Designation, the Company paid a dividend on its Series D Preferred Stock in the form of shares of its Common stock. The total dividend paid to all Series D preferred stock holders was 196,878 common shares.

On October 7, 2010, Cytomedix entered into securities purchase agreements with investors to raise gross proceeds of approximately $1.5 million, before offering related expenses, in a registered direct offering of 3,727,677 shares of its common stock and warrants to purchase 1,863,839 shares of common stock. The per share purchase price paid by investors was $0.40, the purchase price paid by affiliate investors was $0.53. The warrants expire after five years and are exercisable at $0.60 per share on or after April 7, 2011. The Company expects to use the proceeds from this transaction for debt servicing and general corporate and working capital purposes. The Company's total expense in connection with this offering is $199,000.

On October 6, 2010, Cytomedix entered into a certain Purchase Agreement (the "LPA") with Lincoln Park Capital Fund, LLC ("LPC"), which provides that, upon the terms and subject to the conditions and limitations set forth therein, LPC is committed to purchase up to an aggregate of $1.5 million of the Company's shares of common stock, including up to 91,784 commitment shares, over the 25-month term of the LPA. Under this LPA, the Company has the right, in its sole discretion, on every other business day, to present LPC with a purchase notice, directing LPC (as principal) to purchase up to 150,000 shares of the Company's common stock per trading day, up to $1.5 million of the Company's common stock in the aggregate over the 25-month term of the LPA, at a per share price (the "Purchase Price") calculated as the lower of (i) the lowest trading price on the date of sale or (ii) the arithmetic average of the three lowest closing sale prices for the common stock during the 12 consecutive business days ending on the business day immediately preceding the purchase date of those securities. The LPA provides in no event shall the Purchase Price be less than $0.30 per share. The Company will control the timing and amount of any sales of its common stock to LPC. LPC has no right to require any sales by the Company, but is obligated to make purchases from the Company as the Company directs in accordance with the LPA. The Company also can accelerate the amount of common stock to be purchased under certain circumstances. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the LPA. The Company did not pay any expense reimbursement or placement agent fee in connection with the LPA. The LPA may be terminated by the Company at any time, at its discretion, without any penalty or cost to the Company. The Company's ability to sell its shares to LPC is also subject to its obtaining all necessary consents, amendments or waivers as may be required. Under the LPA, the Company may not sell to LPC any shares of its common stock in excess of 19.99% of its shares of common stock outstanding, unless and until such issuances are approved by our shareholders, in the event such approval is required under the rules and regulations of the trading market where the Company's securities are then listed. The LPA contains customary representations, warranties, covenants, closing conditions and indemnification and termination provisions by, among and for the benefit of the parties. LPC has covenanted not to cause or engage in any manner whatsoever, any direct or indirect short selling or hedging of the Company's shares of common stock. The net proceeds the Company may receive will depend on the frequency and prices at which it sells shares of stock to LPC under the LPA and the maximum proceeds it may receive over the 25-month term of the agreement is $1.5 million. The Company expects that any proceeds received by the Company from sales of the Company's common stock to LPC under the LPA, when such sales are made, will be used for debt servicing and general corporate and working capital purposes.

On October 5, 2010, we entered into a $10 million Purchase Agreement (the "Purchase Agreement") with LPC, together with a Registration Rights Agreement (the "Registration Rights Agreement"), whereby LPC has agreed to purchase up to $10 million of the Company's common stock over a 25-month period. Under the Registration Rights Agreement, the Company agreed to file a registration statement related to the transaction with the U.S. Securities & Exchange Commission ("SEC") covering the shares that have been or may be issued to LPC under the Purchase Agreement. After the SEC has declared effective such registration statement, the Company has the right, but not the obligation, over a 25-month period, to sell shares of its common stock

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

to LPC in amounts of up to 150,000 shares per business day every other business day, depending on certain conditions as set forth in the Purchase Agreement, up to the aggregate amount of $10 million. The purchase price for the shares of common stock to be purchased by LPC will be the lower of (i) the lowest trading price on the date of sale or (ii) the arithmetic average of the three lowest closing sale prices for the common stock during the 12 consecutive business days ending on the business day immediately preceding the purchase date of those securities. In no event, however, will the additional shares be sold to LPC at a price of less than $0.30 per share. In consideration for entering into the Purchase Agreement, the Company issued to Lincoln Park 305,944 shares of restricted common stock as an initial commitment and is required to issue up to 336,538 additional commitment shares of common stock, pro rata, as the Company requires LPC to purchase the Company's shares under the Purchase Agreement over the term of the agreement. The Company can also accelerate the amount of common stock to be purchased under certain circumstances. The Purchase Agreement may be terminated by the Company at any time at the Company's discretion without any cost to the Company. Under the Purchase Agreement, the Company may not sell to LPC any shares of its common stock in excess of 19.99% of its shares of common stock outstanding, unless and until such issuances are approved by our shareholders, in the event such approval is required under the rules and regulations of the trading market where the Company's securities are then listed. The Company's ability to sell its shares to LPC is also subject to its obtaining all necessary consents, amendments or waivers as may be required. The proceeds received by the Company under the Purchase Agreement are expected to be used for debt servicing, working capital and general corporate purposes.

On July 15, 2010, pursuant to the terms of the Certificate of Designation, the Company paid a dividend on its Series D Preferred Stock in the form of shares of its Common stock. The total dividend paid to all Series D preferred stock holders was 175,049 shares.

On April 9, 2010, in connection with the Guaranty Agreements, the Company issued warrants to the Guarantors to purchase an aggregate 1,333,334 shares of Common stock of the Company. The warrants expire after five years and are exercisable at $0.5368 per share (see Note 14).

On April 9, 2010, the Company entered into Subscription Agreements with certain accredited investors (the "Purchasers"), with respect to the sale of its (i) 10% Series D convertible preferred stock (the "Preferred Stock"), and (ii) warrants to purchase shares of Common stock of the Company (the "Warrants") (together, the "Securities"), for gross proceeds of $3.65 million (before customary offering expenses of approximately $423,000, and excluding any proceeds that Cytomedix may receive upon exercise of the Warrants) (the "Preferred Stock Offering"). The Preferred Stock earns dividends at the rate of 10% per annum, payable quarterly in cash or, in the Company's sole discretion, in shares of the Company's Common stock. The Preferred Stock may be converted, at the holder's option, into fully paid and non-assessable shares of the Common stock at the conversion price equal to 90% of the volume weighted average price ("VWAP") for the 10 trading days prior to the closing date, or $0.4392. The conversion price on the Preferred Stock for affiliate investors is $0.5580. Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, the holders will be entitled to receive out of the Company's assets an amount equal to the stated value, plus any accrued and unpaid dividends thereon and any other fees then due and owing thereon, for each share of Preferred Stock before any distribution or payment is made to the holders of any junior securities. At any time after the third anniversary of the issuance date, the Company may redeem some or all of the then outstanding Preferred Stock for cash in an amount equal to the stated value of the outstanding Preferred Stock plus any accrued dividends. The Preferred Stock will not be listed on any securities exchange or automated quotation system. The Purchasers were also issued five-year Warrants to purchase, in the aggregate, 4,128,631 shares of Common stock, which number represents 50% of shares of Common stock underlying the Preferred Stock as of the closing of the Preferred Stock Offering, at an exercise price per share of $0.5368. Each Warrant is exercisable immediately on the date of issuance and will expire on April 9, 2015. In accordance with the terms of the Registration Rights Agreement executed by the Company in connection with the April 2010 private offering, the Company filed a registration statement on Form S-3 with the SEC to register

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

the resale of the Company's common stock underlying certain securities sold in the April 2010 private offering. The registration statement was declared effective by the SEC on November 3, 2010. The Preferred Stock and Warrants are classified as equity. The proceeds from the Preferred Stock Offering were allocated among Preferred Stock and Warrants based on their relative fair values. Pursuant to the terms of the Preferred Stock Offering, a beneficial conversion feature in the amount of $1,948,155 was recorded and fully amortized in April 2010 and is reflected in the Preferred dividend section of the statement of operations. The beneficial conversion feature represents the intrinsic value of the Preferred Stock which results from the effective conversion price of the convertible preferred stock being lower than the fair value of the underlying common stock on the date of issuance.

During the year ended December 31, 2010, 851,500 options and warrants expired or were forfeited by contract due to the termination of the underlying service arrangement.

In 2009, the Company granted 663,500 options to purchase the Company's Common stock with exercise prices ranging from $0.30 to $0.62 under the LTIP (see Note 17).

On September 17, 2009, pursuant to the Certificate of Designation filed with the Delaware Secretary of State, the Board of Directors authorized a stock dividend on the Company's Series A and B Convertible Preferred shares. This dividend resulted in the issuance of 7,446 and 7,463 shares of Series A and B Convertible Preferred stock, respectively. The Company did not issue dividends on Series A and B Convertible Preferred Stock in 2010.

In August 2009, the Company entered into securities purchase agreements with certain investors for their purchase of 3,299,679 shares of Cytomedix's Common stock at a purchase price of $0.44 per share, and 5-year warrants to purchase an additional 1,717,800 shares of Cytomedix's Common stock at an exercise price of $0.65 (the "Financing"). Holders of the warrants may exercise warrants at any time on or after 180 days following the issuance date through February 2014. The securities in this Financing were offered and sold pursuant to a prospectus dated March 26, 2008 and a prospectus supplement dated August 10, 2009, pursuant to the Company's effective shelf registration statement on Form S-3 (SEC File No. 333-147793). As a result of this Financing, Cytomedix received gross proceeds of approximately $1,490,000 (before customary offering expenses of approximately $93,000, and excluding any proceeds that Cytomedix may receive upon exercise of the warrants). Certain officers and directors of the Company participated in this offering. Their purchase price per share was $0.57; all other terms and provisions were the same as those of the public investors. The warrants issued in connection with this offering were classified as derivative liabilities.

On January 1, 2009, the Company adopted ASC 815-40 *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock*. As such, certain stock purchase warrants issued in 2004 were reclassified as derivative liabilities. The cumulative effect of this accounting change is reflected in the Statement of Stockholders' Equity.

During the year ended December 31, 2009, 111,602 options and warrants expired or were forfeited by contract due to the termination of the underlying service arrangement.

No dividends were declared or paid on the Company's Common stock in any of the periods discussed in this report.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 16 — Capital Stock – (continued)

At December 31, the following amounts were accrued for dividends payable:

	2010	2009
Series A Preferred Stock	$ 12,324	$ 3,945
Series B Preferred Stock	9,038	3,340
Series D Preferred Stock	71,491	—
	$ 92,853	$ 7,285

As of December 31, 2010, the balance of unamortized stock-based compensation for warrants granted to non-employees was $0.

Note 17 — Long-Term Incentive Plan and Other Compensatory Awards

Cytomedix has a shareholder-approved, Long-Term Incentive Plan ("LTIP") that permits incentive awards of options, stock appreciation rights, restricted stock awards, phantom stock awards, performance unit awards, dividend equivalent awards and other stock-based awards. Cytomedix may issue up to 6,500,000 shares of stock under this LTIP. At December 31, 2010, 680,746 shares were available for future grants. Of all options granted through December 31, 2010, 496,200 had been exercised and 5,323,054 remained outstanding. Option terms are set by the Board of Directors for each option grant, and generally vest immediately upon grant or over a period of time ranging up to three years, are exercisable in whole or installments, and expire ten years from the date of grant. These options expire at various dates through November 10, 2020.

A summary of option activity under the LTIP as of December 31, 2010, and changes during the year then ended is presented below:

LTIP Options	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2010	4,616,554	$ 1.47		
Granted	733,000	$ 0.52		
Exercised	0	—		
Forfeited or expired	(26,500)	$ 0.63		
Outstanding at December 31, 2010	5,323,054	$ 1.34	5.9	$ 147,485
Exercisable at December 31, 2010	4,411,061	$ 1.49	5.3	$ 113,033

The following table summarizes information about stock options outstanding as of December 31, 2010:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number of Outstanding Shares	Weighted Average Remaining Contract Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$0.30 – $1.50	3,773,054	6.3	$ 0.93	2,921,061	$ 1.03
$1.51 – $3.00	1,480,000	4.8	$ 2.22	1,420,000	$ 2.25
$3.01 – $4.50	0	—	—	0	—
$4.51 – $6.00	70,000	5.0	$ 5.20	70,000	$ 5.20

The weighted-average grant-date fair value of stock options granted under the LTIP during the years 2010 and 2009 was $0.39 and $0.47, respectively. No stock options were exercised under the LTIP during the fiscal years ended December 31, 2010 and 2009.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 17 — Long-Term Incentive Plan and Other Compensatory Awards – (continued)

As of December 31, 2010, there was approximately $277,000 of total unrecognized compensation cost related to nonvested stock options granted under the LTIP. That cost is expected to be recognized over a weighted-average period of 2.2 years. The total fair value of stock options granted under the LTIP that vested during the fiscal years ended December 31, 2010 and 2009 was approximately $378,000 and $444,000, respectively.

Additionally, the Company has issued certain compensatory warrants outside of the LTIP, in exchange for the performance of services. A summary of service provider warrant activity as of December 31, 2010, and changes during the year then ended is presented below:

Warrants to Service Providers	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2010	2,224,632	$ 1.55		
Granted	0	—		
Exercised	0	—		
Forfeited or expired	(825,000)	$ 1.38		
Outstanding at December 31, 2010	1,399,632	$ 1.65	3.5	$ 0
Exercisable at December 31, 2010	1,399,632	$ 1.65	3.5	$ 0

The following table summarizes information about compensatory warrants outstanding as of December 31, 2010:

	Warrants Outstanding			Warrants Exercisable	
Range of Exercise Prices	Number of Outstanding Shares	Weighted Average Remaining Contract Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$1.10 – $1.50	950,149	3.6	$ 1.37	950,149	$ 1.37
$1.51 – $3.00	419,483	3.4	$ 1.96	419,483	$ 1.96
$3.01 – $4.50	0	—	—	0	—
$4.51 – $6.00	30,000	0.0	$ 6.00	30,000	$ 6.00

As of December 31, 2010, there was no remaining unrecognized compensation cost related to warrants.

The Company has recorded stock-based compensation expense as follows:

	Year Ended December 31	
Stock-Based Expense	2010	2009
Awards under the LTIP	$ 410,961	$ 431,846
Awards outside the LTIP	$ —	$ 11,580
	$ 410,961	$ 443,426
Included in Statements of Operations caption as follows:		
Salaries and wages	$ 277,945	$ 374,544
Consulting expense	$ 50,693	$ 11,580
General and administrative	$ 82,323	$ 57,302
	$ 410,961	$ 443,426

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 18 — Supplemental Cash Flow Disclosures – Non-Cash Transactions

Non-cash transactions for years ended December 31 include:

	2010	2009
Accrued dividends on preferred stock	$ 275,068	$ 14,951
Preferred dividends paid by issuance of stock	189,500	14,909
Business acquisitions:		
Inventory acquired	1,151,035	—
Propery and equipment acquired	768,000	—
Goodwill and intangible assets	4,089,823	—
Deferred charges	655,260	—
Note Payable for balance of acquisition	(4,008,858)	—

Cash paid for interest was $371,000 and $13,000 in 2010 and 2009, respectively. There were no income taxes paid in 2010 and 2009.

Note 19 — Operating Leases

The Company leases its office space under an operating lease expiring in December 2013, with future minimum lease payments as indicated in the table below:

Years ending December 31:	
2011	$ 100,904
2012	70,413
2013	71,895
Thereafter	—
Total future minimum lease payments	$ 243,212

For the years ended December 31, 2010 and 2009, the Company incurred rent expense of approximately $77,000 and $68,000, respectively.

Note 20 — Commitments and Contingencies

The Company is prohibited from granting a security interest in certain of the Company's patents and/or future royalty streams under the terms of the Series A and B Convertible Preferred stock.

Under the Company's plan of reorganization upon emergence from bankruptcy in July 2002, the Series A Preferred stock and the dividends accrued thereon that existed prior to emergence from bankruptcy are to be exchanged into one share of new Common stock for every five shares of Series A Preferred stock held as of the date of emergence from bankruptcy. This exchange is contingent on the Company's attaining aggregate gross revenues for four consecutive quarters of at least $10,000,000 and would result in the issuance of 325,000 shares of Common stock. Through December 31, 2010, the Company had not reached such aggregate revenue levels.

In conjunction with its FDA clearance, the Company agreed to conduct a post-market surveillance study to further analyze the safety profile of bovine thrombin as used in the AutoloGel™ System. This study is estimated to cost between $500,000 and $700,000 over a period of several years, which began in the third quarter of 2008. As of December 31, 2010, approximately $280,000 had been incurred.

In July 2009, in satisfaction of a new Maryland law pertaining to Wholesale Distributor Permits, the Company established a Letter of Credit, in the amount of $50,000, naming the Maryland Board of Pharmacy as the beneficiary. This Letter of Credit serves as security for the performance by the Company of its obligations under applicable Maryland law regarding this permit and is collateralized by the CD described in Fair Value Measurements (see Note 5).

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 20 — Commitments and Contingencies – (continued)

In 2011, we are committed to $432,000 in capital expenditures representing Angel® machines sufficient to address forecasted customer demand.

The Company's offices and warehouse facilities are located in Gaithersburg, Maryland, and comprise approximately 4,100 square feet under a 40 month operating lease expiring December 2013. Monthly rent, including our share of certain annual operating costs and taxes, is approximately $5,800 per month, with the first four months free.

The Company also rents office space in Rockville, Maryland, under a lease expiring in June 2011. The Company has agreed in principle with the landlord to an early termination of this lease. Amounts totaling $18,000 to be paid under the early termination agreement have been accrued as of December 31, 2010.

Note 21 — Subsequent Events

Dividend on Series D Preferred Stock

On January 18, 2011, pursuant to the terms of the Certificate of Designation, the Company paid a dividend on its Series D Preferred Stock in the form of shares of its common stock. The total dividend paid to all Series D preferred stock holders was 142,915 shares of common stock.

Stock Option Grants

On January 26, 2011, under the LTIP, the Company granted 190,000 stock options to board members for their upcoming service in 2011, 10,000 to an employee, and 50,000 to a consultant. These options have an exercise price of $0.49, which was the closing market price on their date of grant and expire ten years from the date of grant, except for the consultant options which have a 3 year term. The board members' options vest in equal monthly installments through December 2011, the other options vest over a period of two to three years.

Warrant Amendments

On January 28, 2011, with approval of the respective warrant holders, the Company made the following modifications to existing warrants:

- August 2009 Warrants — the exercise price was reduced to $0.51 and the clause requiring pricing adjustments upon certain subsequent equity issuances was deleted
- October 2010 Warrants — the clause requiring pricing adjustments upon certain subsequent equity issuances was deleted

These modifications resulted in the reclassification of the derivative liability associated with these warrants to Additional paid-in capital.

CYTOMEDIX, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 22 — Quarterly Financial Data (Unaudited) Required by Regulation S-X Item 3-02(b)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2010				
Revenues	$ 178,734	$ 1,147,219	$ 1,297,447	$ 1,287,633
Gross profit	$ 353,177	$ 461,941	$ 762,998	$ 719,967
Net loss	$(1,067,966)	$(2,257,359)	$(1,415,021)	$(2,076,405)
Loss per common share –				
Basic and diluted	$ (0.03)	$ (0.11)	$ (0.04)	$ (0.05)
2009				
Revenues	$ 539,137	$ 569,306	$ 538,313	$ 419,428
Gross profit	$ 406,150	$ 451,333	$ 434,792	$ 315,104
Net loss	$ (943,077)	$(1,163,545)	$ (671,771)	$ (480,824)
Loss per common share –				
Basic and diluted	$ (0.03)	$ (0.03)	$ (0.02)	$ (0.01)

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report, under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer (the "Certifying Officers"), the Company conducted an evaluation of its disclosure controls and procedures. As defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act, the term "disclosure controls and procedures" means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer's management, including the Certifying Officers, to allow timely decisions regarding required disclosure. Based on this evaluation, the Certifying Officers have concluded that the Company's disclosure controls and procedures were effective as of December 31, 2010.

The Company had previously reported a material weakness for the year ended December 31, 2009 and each of the periods ended March 31, 2009 through September 30, 2010. However, as of December 31, 2010, that material weakness had been effectively remediated as further described below.

Management's Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of its management, including the Certifying Officers, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on this evaluation under the framework in *Internal Control — Integrated Framework*, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2010.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fourth quarter of 2010 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Remediation of Previously Disclosed Material Weakness

The Company had previously reported a material weakness in internal control over financial reporting, as of December 31, 2009, related to accounting for stock purchase warrants, which also resulted in a restatement of the consolidated financial statements for the year ended December 31, 2009 and each of the quarterly periods ended March 31, 2010, June 30, 2010 and September 30, 2010. In April 2010, the Company implemented enhanced procedures related to accounting for equity transactions, including those containing stock purchase warrants, which includes the engagement of an outside expert to assist the Company with the analysis of such transactions. These new procedures assisted the Company in identifying the previous errors in accounting for certain stock purchase warrants during 2009 that qualified for warrant liabilities in accordance with ASC 815-40. The accounting for these warrants was corrected through restatement. The Company continued to monitor

and analyze the effects of these new procedures on its accounting for equity transactions through December 31, 2010, including several transactions that included stock purchase warrants. Management has concluded, based on the documentation and testing of the new procedures, that as of December 31, 2010, the material weakness has been remediated.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The following table sets forth the names and ages of all Cytomedix directors and executive officers as of December 31, 2010. Officers are appointed by, and serve at the pleasure of, the Board of Directors.

Name	Age	Date of Election or Appointment	Position(s) with the Company
James S. Benson	71	November 1, 2004	Presiding Independent Director and Acting Chairman of the Board
Stephen N. Keith	58	September 19, 2008	Independent Director
Mark T. McLoughlin	55	June 7, 2004	Independent Director
Craig B. Mendelsohn	56	November 12, 2009	Independent Director
C. Eric Winzer	53	January 30, 2009	Independent Director
David E. Jorden	48	September 19, 2008	Executive Director
Martin P. Rosendale	53	July 1, 2008	Chief Executive Officer, Director
Andrew S. Maslan	41	August 15, 2005	Chief Financial Officer
Patrick P. Vanek	55	July 26, 2010	Vice President of Operations

Biographical Information of Directors and Executive Officers

Biographical information with respect to the Company's current executive officers and directors is provided below.

James S. Benson has served as a Director since November 1, 2004. Mr. Benson has over 25 years of experience in the healthcare industry, and also serves as a director of Cryolife, Inc., and Medical Device Consultants, Inc. Mr. Benson retired from the Advanced Medical Device Association (Advamed) where he served as executive vice president for technical and regulatory affairs. Prior to that, he held numerous senior positions at the Food and Drug Administration ("FDA") over a twenty year period. He retired from the FDA as director of the Center for Devices and Radiological Health (CDRH). Earlier, he served as deputy commissioner of the FDA, and also as its commissioner for a one-year period. Mr. Benson earned a B.S. degree in civil engineering from the University of Maryland and a M.S. degree in nuclear engineering from the Georgia Institute of Technology. Mr. Benson brings his experience and expertise in the areas of the FDA regulation, corporate governance, and executive leadership to the Board and the Company.

David E. Jorden, CPA, CFA has served as a Director since September 19, 2008 and Executive Board Member since October 1, 2008. From 2003 to 2008, he was with Morgan Stanley's Private Wealth Management group where he was responsible for equity portfolio management for high net worth individuals. Prior to Morgan Stanley, Mr. Jorden served as CFO for Genometrix, Inc., a private genomics/life sciences company focused on high-throughput microarray applications. Mr. Jorden was previously a principal with Fayez Sarofim & Co. Mr. Jorden has a M.M. from Northwestern University's Kellogg School and a B.B.A. from University of Texas at Austin. He holds both Certified Financial Analyst and Certified Public Accountant designations. Mr. Jorden serves on the board of Opexa Therapeutics, Inc. (Nasdaq: OPXA). He is also on the board of two private companies, PLx Pharma, Inc., a specialty pharmaceutical company developing GI safer NSAIDs (nonsteroidal anti-inflammatory drugs), and DLush, LLC, a San Diego based deluxe beverage retail concept. Mr. Jorden brings his experience and expertise in the areas of capital raising, investor relations, financial management and analysis, and business strategy to the Board and the Company.

Stephen N. Keith, MD, MSPH has served as a Director since September 19, 2008. Dr. Keith currently holds the office of Chief Executive Officer of the American College of Clinical Pharmacology, a premier professional society for the discipline of clinical pharmacology. From 2002 until 2009, Dr. Keith was President and Chief Operating Officer of Panacea Pharmaceuticals, Inc., a biopharmaceutical company located

in Gaithersburg, MD. From 2005 to 2006, Dr. Keith served as Senior Consultant at Biologics Consulting Group, LLC, a biopharmaceutical consulting company located in Alexandria, VA. From 2003 to 2005, he was Managing Director at Glocap Advisors LLC, a division of Glocap Funding LLC, an investment banking firm based in New York, NY. Dr. Keith has held a range of senior management positions in the pharmaceutical and biotechnology industries, including President and Chief Operating Officer at Antex Biologics Inc, another Gaithersburg, MD pharmaceutical company; Vice President, Marketing and Sales at North American Vaccine, Inc., a Columbia, MD pharmaceutical company; Senior Director, Health Care Delivery Policy in Corporate Public Affairs, Senior Customer Manager in the U.S. Human Health Division and Senior Director, Health Strategies, in the Merck-Medco Managed Care Division at Merck & Co, Inc. (NYSE: MRK). Dr. Keith also serves as Chairman of the Board of Directors of NanoVec, Inc., an early-stage biopharmaceutical company. Dr. Keith holds an undergraduate degree magna cum laude from Amherst College in Massachusetts (1973), a degree in medicine from University of Illinois, College of Medicine, (1977) and a Master of Science in Public Health degree from the University of California, Los Angeles (1982). He is a licensed physician in the states of California and Maryland. Dr. Keith is a Fellow of the Academy of Pediatrics and a Diplomate of the American Board of Pediatrics. Dr. Keith brings his experience and expertise in the areas of practice of medicine, product commercialization, investment banking, and executive leadership to the Board and the Company.

Mark T. McLoughlin has served as a Director since June 7, 2004. Mr. McLoughlin currently serves as a Senior Vice President for VWR International, a global distributor of laboratory supplies, equipment and services to the pharma, biotech, industrial and clinical laboratory. In this capacity, he has responsibility for the sourcing and marketing functions for North America. Prior to joining VWR International, he was Senior Vice President, Chief Marketing Officer for Cardinal Health based in Rolle, Switzerland. Prior to joining Cardinal, he was vice president of commercial operations for Norwood Abbey Ltd., an Australian-based medical technology company. Earlier, he was President of North American operations for Ion Beam Application, Inc., a Belgium-based global medical technology company. His executive career experience also includes Mallinckrodt, as well as positions with other healthcare companies. Mr. McLoughlin brings his experience and expertise in the areas of sales, marketing, distribution, international business, medical supplies industry, and executive leadership to the Board and the Company.

Craig B. Mendelsohn, M.D., J.D. has served as a Director since November 12, 2009. Dr. Mendelsohn currently serves as Vice President and Deputy General Counsel for the American Red Cross where he is responsible for managing a staff of attorneys that provide counsel to the Biomedical Services division at the organization, while providing guidance and legal counsel to executive management and the Board of Governors. From 2002 until he joined American Red Cross, he held senior-level Medical Director and Regulatory Affairs positions for a number of medical device and pharmaceutical companies including Cardinal Health (2007 – 2008), Core Dynamics, Inc. (2005 – 2007) and ZLB Bioplasma, Inc. (2002 – 2004), as well as at the Plasma Protein Therapeutics Association (2001 – 2002). Dr. Mendelsohn began his legal career in 1994 at the Washington, D.C. headquarters of Hogan & Hartson, an international full-service law firm, as a member of the Food, Drug, Agriculture, and Medical Devices Group. Dr. Mendelsohn also had a private practice in ophthalmology for ten years prior to obtaining his law degree. Dr. Mendelsohn received his Juris Doctor, Cum Laude from Georgetown University Law Center, his Doctor of Medicine from George Washington University Medical Center, and his Bachelor of Arts in Chemistry from Emory University. Dr. Mendelsohn brings his experience and expertise in the areas of regulatory law, biomedical industry, and practice of medicine to the Board and the Company.

C. Eric Winzer has served as Director since January 30, 2009. Mr. Winzer currently serves as Chief Financial Officer of OpGen, Inc., a privately held DNA molecular diagnostics company headquartered in Gaithersburg, MD. Prior to joining OpGen, Mr. Winzer was Executive Vice President and Chief Financial Officer of Avalon Pharmaceuticals, Inc. (Nasdaq: AVRX) from July 2007 to June 2009. Mr. Winzer was with Life Technologies Corporation (Nasdaq: LIFE), formerly Invitrogen Corporation, a provider of life science technologies for disease research and drug discovery, from 2000 to 2006, where he served as Senior VP and Chief Financial Officer, Executive Sponsor for Life's ERP implementation and VP, Finance. From 1986 to 2000, Mr. Winzer held positions of increasing responsibilities at Life Technologies, Inc., including Chief Financial Officer, Secretary and Treasurer. From 1980 until 1986, he held various financial positions at Genex Corporation.

Mr. Winzer received his B.A. in Economics and Business Administration from McDaniel College and an M.B.A. from Mount Saint Mary's University. Mr. Winzer brings his experience and expertise in the areas of financial management and analysis, corporate governance, mergers and acquisitions to the Board and the Company.

Martin P. Rosendale has served as our Chief Executive Officer and Director since July 1, 2008. Prior to that, in March 2008, he was appointed as Executive Vice-President and Chief Operating Officer of the Company. From January 2005 to March 2008, Mr. Rosendale held the position of Chief Executive Officer of Core Dynamics, Inc., a Rockville, MD biotechnology startup company using cryopreservation technology developed in Israel. From March 2001 to December 2004, Mr. Rosendale held the position of Senior Vice President and General Manager of ZLB Bioplasma, Inc., a Glendale, CA biologics company, as well as other positions at various biotechnology companies. Mr. Rosendale holds a Bachelor of Science degree in Microbiology from California State University in Long Beach, CA (1982). Mr. Rosendale's day to day leadership, as Chief Executive Officer of Cytomedix, provides him with intimate knowledge of our operations.

Andrew S. Maslan, CPA joined the Company as corporate controller on July 1, 2005 and became the Chief Financial Officer on August 15, 2005. Mr. Maslan most recently served as controller for BioReliance Corporation based in Rockville, MD. Earlier, he held positions with two other Rockville, MD-based companies, serving as a principal with GlobeTraders, Inc., and senior accountant for Providence Laboratory Associates. Mr. Maslan began his professional career serving as an auditor with KPMG Peat Marwick and is a Certified Public Accountant licensed in the state of Maryland.

Patrick Vanek joined Cytomedix, Inc. in July 2010. He brings to Cytomedix more than 30 years of diverse technical and managerial experience in pharmaceuticals and medical devices, specifically Formulation Design, Process Development, QA/QC and Supply Chain/Logistics. Prior to joining Cytomedix, Mr. Vanek spent 12 years at Otsuka America Pharmaceutical, Inc. where he rose through a number of managerial positions to become Vice President of Technical Operations. Prior to that, he held various development/technical management positions at KV Pharmaceutical Corp., Teva Pharmaceuticals USA, Wyeth Laboratories and McNeil Pharmaceutical. Mr. Vanek earned a B.S. in Pharmacy from the Philadelphia College of Pharmacy & Science and is a Registered Pharmacist.

There are no family relationships between any of the Company's executive officers or directors and there are no arrangements or understandings between a director and any other person pursuant to which such person was elected as director. There were no material changes to the procedures by which shareholders may recommend nominees to the Board since the Company's last disclosure of such policies.

No director or officer of the Company has, during the last 10 years, been subject to or involved in any legal proceedings described under Item 401(f) of Regulation S-K, been convicted of any criminal proceeding (excluding traffic violations or similar misdemeanors), or been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, United States federal or state securities laws or finding any violations with respect to such laws.

Board of Directors

The Board oversees the business affairs of Cytomedix and monitors the performance of management. Under the Company's Bylaws, as amended and restated, the Board of Directors' size may not exceed seven members. Presently, there are seven Board members. At each annual meeting, shareholders elect directors for a full term or the remainder thereof, as the case may be, to succeed those whose terms have expired. Each director holds office for the term for which he or she is elected or until his or her successor is duly elected. There has been no material change in the procedures by which shareholders may recommend nominees to the Company's Board.

Audit Committee

The Board formed an Audit Committee in December 2004. Mr. Winzer currently serves as chairman of the Audit Committee. The Board has determined that Mr. Winzer is an audit committee financial expert as defined by Item 407(d) of Regulation S-K under the Securities Act and is "independent" within the meaning of Item 7(d)(3)(iv) of Schedule 14A under the Exchange Act. Other members of the Audit Committee are

Mr. McLoughlin and Dr. Keith. Following its transition from the NYSE Amex onto the OTC Bulletin Board, the Company is no longer subject to the requirements of the NYSE Amex Company Guide and, particularly, the "independence" standards set forth in the Company Guide. However, the Company elects to continue to utilize the same standard in determining the "independence" status of its Board and Board committee members. The Board has determined that each member of the Audit Committee is "independent" as required by the NYSE Amex Company Guide and under the federal securities laws. The Audit Committee has a written charter adopted by the Board, which is available on the Company's website at *www.cytomedix.com* and at no charge by contacting the Company at its headquarters as listed on the cover page of this report. Information appearing on the Company's web site is not part of this Annual Report.

The purpose of the Audit Committee is to assist the Board in its general oversight of Cytomedix's financial reporting, internal controls and audit functions. As described in the Audit Committee Charter, which is available at the Company's website, the Audit Committee's primary responsibilities are to:

- Review whether or not management has maintained the reliability and integrity of the accounting policies and financial reporting and disclosure practices of the Company;
- Review whether or not management has established and maintained processes to ensure that an adequate system of internal controls is functioning within the Company;
- Review whether or not management has established and maintained processes to ensure compliance by the Company with legal and regulatory requirements that may impact its financial reporting and disclosure obligations;
- Oversee the selection and retention of the Company's independent public accountants, their qualifications and independence;
- Prepare a report of the Audit Committee for inclusion in the proxy statement for the Company's annual meeting of shareholders;
- Review the scope and cost of the audit, the performance and procedures of the auditors, the final report of the independent auditors; and
- Perform all other duties as the Board may from time to time designate.

Code of Conduct and Ethics

In April 2005, the Board approved a Code of Conduct and Ethics applicable to all directors, officers and employees which complies with Section 807 of the NYSE Amex Company Guide and with Item 406 of Regulation S-K. A copy of this Code of Conduct is available at the Company's website at *www.cytomedix.com*, and is available at no charge by contacting the Company at its headquarters as listed on the cover page of this Annual Report. Information appearing on the Company's website is not part of this Annual Report.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires officers, directors and persons who own more than ten percent of a registered class of equity securities to, within specified time periods, file certain reports of ownership and changes in ownership with the SEC.

Based solely upon a review of Forms 3 and Forms 4 furnished to the Company pursuant to Rule 16a-3 under this Act during the Company's most recent fiscal year, and Forms 5 with respect to the most recent fiscal year, the Company believes that, except as set forth below, all such forms required to be filed pursuant to Section 16(a) were timely filed as necessary by the executive officers, directors and security holders required to file same during the fiscal year ended December 31, 2010. Forms 4 for Messrs. Maslan, Rosendale, and Jorden in connection with the October 15, 2010 dividend payment on the Series D Preferred Stock were inadvertently filed late. All such forms have been filed to date.

ITEM 11. Executive Compensation

This discussion focuses on the compensation paid to "named executive officers," which is a defined term generally encompassing all persons that served as principal executive officer at any time during the fiscal year,

as well as certain other highly paid executive officers serving in such positions at the end of the fiscal year. During 2009 and 2010, the named executive officers consisted of the following persons:

- Martin P. Rosendale — Chief Executive Officer (Principal Executive Officer)
- Andrew S. Maslan — Chief Financial Officer
- Patrick P. Vanek — Vice President of Operations (effective July 16, 2010)
- Carelyn P. Fylling — Vice President of Professional Services (through July 13, 2010)

Summary Compensation Table

Name and Principal Position	Year	Salary	Bonus	Option Awards	All Other Compensation	Total
Martin P. Rosendale[1]	2010	$ 300,000	$ —	$ —	$ 9,800	$ 309,800
Chief Executive Officer	2009	$ 300,000	$ —	$ 84,830	$ 9,406	$ 394,236
(Effective July 1, 2008)						
Andrew S. Maslan[2]	2010	$ 200,000	$ —	$ 25,628	$ 8,000	$ 233,628
Chief Financial Officer	2009	$ 200,000	$ —	$ 36,274	$ 8,000	$ 244,274
(Effective August 16, 2005)						
Patrick P. Vanek[3]	2010	$ 84,943	$ —	$ 51,256	$ —	$ 136,199
VP – Operations						
(Effective July 26, 2010)						
Carelyn P. Fylling[4]	2010	$ 142,291	$ —	$ 15,377	$ 5,692	$ 163,360
VP – Professional Services	2009	$ 150,500	$ —	$ 25,302	$ 6,020	$ 181,822

(1) Mr. Rosendale may earn a cash bonus of up to 50% of his salary. The exact amount of such bonus compensation is to be determined by the Compensation Committee and approved by the Board. Amounts under Option Awards represent the grant date fair value of 165,000 options granted during 2009. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

(2) Mr. Maslan may earn a cash bonus of up to 35% of his salary. The exact amount of such bonus compensation is to be determined by the Compensation Committee and approved by the Board. Amounts under Option Awards represent the grant date fair value of 50,000 and 65,000 options granted during 2010 and 2009, respectively. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

(3) Mr. Vanek joined the Company on July 26, 2010 as an officer and Vice President. Amount of salary for 2010 represents amount earned from his date of hire. Mr. Vanek may earn a cash bonus of up to 30% of his salary. The exact amount of such bonus compensation is to be determined by the Compensation Committee and approved by the Board. Amounts under Option Awards represent the grant date fair value of 100,000 options granted during 2010. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

(4) Ms. Fylling relinquished her position as an officer of the Company effective July 13, 2010. However, she remains an employee and Vice President. Ms. Fylling may earn a cash bonus of up to 35% of her salary. The exact amount of such bonus compensation is to be determined by the Compensation Committee and approved by the Board. Amounts under Option Awards represent the grant date fair value of 30,000 and 45,000 options granted during 2010 and 2009, respectively. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

Employment Contracts and Termination of Employment and Change-in-Control Arrangements

The Company has employment agreements with the following named executive officers. The following is a description of these agreements.

Martin P. Rosendale: Mr. Rosendale's employment agreement, as amended, provides for his at-will employment as the Company's Chief Executive Officer. Effective January 1, 2009, Mr. Rosendale's annual salary was $300,000 and his target bonus percentage was 50%, depending on the achievement of performance

criteria. This compensation is subject to annual review and modification by the Board of Directors. If Mr. Rosendale's employment is terminated by the Company, he is entitled to receive a lump sum severance payment of $50,000.

Andrew S. Maslan: Mr. Maslan's employment agreement, as amended, provides for his at-will employment as the Company's Chief Financial Officer. Effective October 1, 2008, Mr. Maslan's annual salary was $200,000 and his target bonus percentage was 35%, depending on the achievement of performance criteria. This compensation is subject to annual review and modification by the Board of Directors. If Mr. Maslan's employment is terminated by the Company without cause, he is entitled to receive his annual base salary and all other benefits for a period of six months on the same terms and schedules as existed immediately prior to his termination. Additionally, unvested stock options will continue to vest during this six month period.

Patrick P. Vanek: Mr. Vanek joined the Company on July 26, 2010. His employment agreement provides for his at-will employment as the Company's Vice President, Operations at an annual salary of $195,000 and a target bonus percentage of 30%, depending on the achievement of performance criteria. This compensation is subject to annual review and modification by the Board of Directors.

Outstanding Equity Awards at December 31, 2010

	Option Awards			
Name	**Number of Securities Underlying Unexercised Options Exercisable[1]**	**Number of Securities Underlying Unexercised Options Unexercisable**	**Option Exercise Price**	**Option Expiration Date**
Martin P. Rosendale	140,000	60,000[2]	$ 1.54	3/14/2018
	200,000	100,000[3]	$ 0.75	9/19/2018
	133,334	66,666[4]	$ 0.40	12/16/2018
	121,667	43,333[5]	$ 0.56	9/18/2019
Kshitij Mohan	490,000	—	$ 1.50	4/20/2014
	500,000	—	$ 2.24	4/20/2014
	100,000	—	$ 2.24	6/6/2015
	100,000	—	$ 2.24	8/17/2016
	59,310	—	$ 1.50	1/25/2018
	30,000	—	$ 1.50	1/25/2018
Andrew S. Maslan	60,000	—	$ 5.07	1/11/2016
	40,000	—	$ 2.52	3/16/2016
	50,000	—	$ 2.73	10/11/2016
	20,000	—	$ 0.88	7/27/2017
	66,667	33,333[6]	$ 0.70	9/18/2018
	35,000	—	$ 0.60	5/13/2019
	10,000	20,000[7]	$ 0.62	9/17/2019
	—	50,000[8]	$ 0.56	7/13/2020
Patrick P. Vanek	—	100,000[9]	$ 0.56	7/13/2020
Carelyn P. Fylling	250,000	—	$ 1.50	8/7/2012
	19,077	—	$ 1.25	10/21/2013
	20,000	—	$ 2.40	1/11/2016
	20,000	—	$ 0.88	7/27/2017
	20,000	10,000[10]	$ 0.70	9/18/2018
	15,000	—	$ 0.60	5/13/2019
	10,000	20,000[11]	$ 0.62	9/17/2019

Name	Option Awards			
	Number of Securities Underlying Unexercised Options Exercisable[1]	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price	Option Expiration Date
	—	30,000[12]	$ 0.56	7/13/2020

(1) All options are fully vested.

(2) Options vest as follows: 60,000 on 3/24/2011.

(3) Options vest as follows: 100,000 on 1/1/2011.

(4) Options vest as follows: 66,666 on 1/1/2011.

(5) Options vest as follows: 21,667 on 9/18/2011 and 21,666 on 9/18/2012.

(6) Options vest as follows: 33,333 on 1/1/2011.

(7) Options vest as follows: 10,000 each on 9/17/2011 and 9/17/2012.

(8) Options vest as follows: 16,667 each on 7/13/2011 and 7/13/2012, and 16,666 on 7/13/2013.

(9) Options vest as follows: 33,334 on 7/13/2011, and 33,333 each on 7/13/2012 and 7/13/2013.

(10)Options vest as follows: 10,000 on 1/1/2011.

(11)Options vest as follows: 10,000 each on 9/17/2011 and 9/17/2012.

(12)Options vest as follows: 10,000 each on 7/13/2011, 7/13/2012, and 7/13/2013.

Director Compensation in 2010

For service during 2010, each non-employee director was entitled to and received options to purchase 30,000 shares of the Company's Common stock and, in addition, the Presiding Director and Acting Chairman of the Board and each committee chair was entitled to and received options to purchase 10,000 shares of the Company's Common stock.

Name	Fees Earned or Paid in Cash	Option Awards[1]	All Other Compensation	Total
James S. Benson	$ 22,500	$ 17,344	$ —	$ 39,844
Stephen N. Keith	$ 20,250	$ 17,344	$ —	$ 37,594
Mark T. McLoughlin	$ 20,250	$ 17,344	$ —	$ 37,594
Craig B. Mendelsohn	$ 16,500	$ 13,008	$ —	$ 29,508
C. Eric Winzer	$ 22,500	$ 25,628	$ —	$ 48,128
David E. Jorden[2]	$ —	$ 17,344	$ 60,000	$ 77,344

(1) At December 31, 2010, the following number of stock options remained unexercised by non-employee directors as follows: Benson — 270,000, Keith — 80,000, McLoughlin — 270,000, Mendelsohn — 35,000, Winzer — 80,000. Assumptions used to determine the grant date fair value of option awards may be found in Note 3 to the Consolidated Financial Statements.

(2) Mr. Jorden is an executive member of management in addition to serving on the Board. He is not compensated for his Board service. The amount in the Option Awards column represents the grant date fair value of 50,000 options granted during 2010. The amount in the All Other Compensation column represents his cash compensation as an employee in 2010.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Securities Authorized for Issuance under Equity Compensation Plans

The Company maintains a Long-Term Incentive Plan approved by its shareholders that authorizes awards representing up to 6,500,000 shares of Common stock.

Equity Compensation Plan Information as of December 31, 2010

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
	(a)	(b)	(c)
Equity compensation plans approved by security holders	5,323,054	$ 1.34	680,746
Equity compensation plans not approved by security holders[1]	1,399,632	$ 1.65	n/a
Total	6,722,686	$ 1.40	680,746

(1) These amounts represent the aggregate of individual compensation arrangements with external service providers.

As of December 31, 2010, 496,200 shares of Common stock have been issued upon exercise of options granted pursuant to the Long Term Incentive Plan.

Security Ownership of Management

The following table sets forth information regarding the ownership of the Company's Common stock as of March 18, 2011 by: (i) each director; (ii) each of the Named Executive Officers in the Summary Compensation Table; and (iii) all executive officers and directors of the Company as a group. As of March 18, 2011, there are 47,554,960 shares of Common stock issued and outstanding.

Name of Beneficial Owner[10]	Beneficial Ownership[1]	Percent of Class[1]
James S. Benson	310,000[2]	*
David E. Jorden	6,671,828[3]	13.8%
Stephen N. Keith	96,667[4]	*
Andrew S. Maslan	414,751[5]	*
Mark T. McLoughlin	306,668[6]	*
Craig B. Mendelsohn	47,500[7]	*
Martin P. Rosendale	973,313[8]	2.0%
Patrick P. Vanek	—	*
C. Eric Winzer	96,667[9]	*
Group consisting of Benson, Jorden, Keith, Maslan, McLoughlin, Mendelsohn, Rosendale, Vanek, and Winzer	8,917,394	17.7%

* Less than 1%.

(1) For purposes of determining the amount of securities beneficially owned, share amounts include all Common stock owned outright plus all shares of Common stock issuable upon conversion of convertible notes, or the exercise of options or warrants currently exercisable, or exercisable within 60 days after the preparation of this table. The Percent of Class is based on the number of shares of the Company's Common stock outstanding as of March 18, 2011, which was 47,554,960. Shares of Common stock issuable upon conversion of convertible notes, or the exercise of options or warrants currently exercisable, or exercisable within 60 days after the preparation of this table, are deemed outstanding for the purpose of computing the percentage ownership of the person holding such options or warrants, but are not deemed outstanding for computing the percentage ownership of any other persons.

(2) Includes 310,000 shares Mr. Benson may acquire upon the exercise of stock options.

(3) Includes 653,459 shares Mr. Jorden may acquire upon the exercise of stock options or warrants.

(4) Includes 96,667 shares Dr. Keith may acquire upon the exercise of stock options.

(5) Includes 338,890 shares Mr. Maslan may acquire upon the exercise of stock options or warrants.

(6) Includes 243,334 shares Mr. McLoughlin may acquire upon the exercise of stock options or warrants.

(7) Includes 47,500 shares Dr. Mendelsohn may acquire upon the exercise of stock options.

(8) Includes 866,058 shares Mr. Rosendale may acquire upon the exercise of stock options or warrants and 10,000 shares which are held by Mr. Rosendale's spouse.

(9) Includes 96,667 shares Mr. Winzer may acquire upon the exercise of stock options. Mr. Winzer disclaims beneficial ownership to acquire 6,667 shares of common stock of the Company, which options have been transferred to his ex-spouse pursuant to a domestic relations order.

(10)All addresses are c/o Cytomedix, Inc., 209 Perry Parkway, Suite 7, Gaithersburg, MD 20877.

There are no arrangements, known to the Company, including any pledge by any person of securities of the registrant, the operation of, which may, at a subsequent date, result in a change of control of the registrant.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

In 2010, the Company did not enter into any related party transactions exceeding $120,000.

Review and Approval Policies and Procedures for Related Party Transactions

Pursuant to Board policy, the Company's executive officers and directors, and principal stockholders, including their immediate family members and affiliates, are not permitted to enter into a related party transaction without the prior consent of the Audit Committee. Any request for such related party transaction with an executive officer, director, principal stockholder, or any of such persons' immediate family members or affiliates, in which the amount involved exceeds $120,000 must first be presented to the Audit Committee for review, consideration and approval. All of the Company's directors, executive officers and employees are required to report to the Audit Committee any such related party transaction. In approving or rejecting the proposed agreement, the Audit Committee will consider the relevant facts and circumstances available and deemed relevant to the Audit Committee which will approve only those agreements that, in light of known circumstances, are in, or are not inconsistent with, the Company's best interests, as the Audit Committee determines in the good faith exercise of its discretion.

Director Independence

The Company has the following directors: James S. Benson, David E. Jorden, Stephen N. Keith, Mark T. McLoughlin, Craig B. Mendelsohn, Martin P. Rosendale, and C. Eric Winzer. Following its transition from the NYSE Amex onto the OTC Bulletin Board, the Company is no longer subject to the requirements of the NYSE Amex Company Guide and, particularly, the "independence" standards set forth in the Company Guide. However, the Company elects to continue to utilize the same standard in determining the "independence" status of its Board and Board committee members. Each of these directors is independent as defined by the listing standards of the NYSE Amex Company Guide, with the exception of Messrs. Rosendale and Jorden, who, in addition to serving on the Board, also serve as the Company's Chief Executive Officer and Executive Director, respectively. Neither of these gentlemen serves on the Audit, Nominating and Governance, or Compensation Committees. The Board based its independent determinations primarily on a review of the responses of the directors and executive officers to questions regarding employment and transaction history, affiliations and family and other relationships and on discussions with the directors. None of our directors engages in any transaction, relationship, or arrangement contemplated under section 404(a) of Regulation S-K.

ITEM 14. Principal Accounting Fees and Services

The following table presents fees for professional services rendered by PricewaterhouseCoopers, LLP for the fiscal years 2010 and 2009:

Services Performed	2010	2009
Audit fees[1]	$ 500,500	$ 290,000
Audit-related fees[2]	15,000	20,000
Tax fees[3]	26,500	25,123
All other fees[4]	—	—
Total Fees	$ 542,000	$ 335,123

(1) Audit fees represent fees billed for professional services provided in connection with the audit of the

Company's annual financial statements, reviews of its quarterly financial statements, and audit services provided in connection with statutory and regulatory filings for those years.

(2) Audit-related fees represent fees billed primarily for assurance and related services not reported under Audit fees.

(3) Tax fees principally represent fees billed for tax preparation, tax advice and tax planning services.

(4) All other fees principally would include fees billed for products and services provided by the accountant, other than the services reported under the three captions above.

Pursuant to its charter, the Audit Committee must pre-approve audit services and permitted non-audit services (including the fees and terms thereof) to be performed for the Company by its independent auditor. In 2010 and 2009, all such services were pre-approved by the Audit Committee.

Audit Committee Pre-Approval Policies and Procedures

The Audit Committee has the sole authority to pre-approve all audit and non-audit services provided by independent accountants. The Audit Committee has adopted policies and procedures for the pre-approval of services provided by the independent accountants. The Audit Committee, on an annual basis, reviews audit and non-audit services performed by the independent accountants. All audit and non-audit services are pre-approved by the Audit Committee, which considers, among other things, the possible effect of the performance of such services on the accountants' independence. All requests for services to be provided by the independent accountants, which must include a description of the services to be rendered and the amount of corresponding fees, are submitted to the Chief Financial Officer. The CFO has the authority to authorize services that fall within the category of services that the Audit Committee has pre-approved. If there is any question as to whether a request for services falls within the category of services that the Audit Committee has pre-approved, the CFO will consult with the chairman of the Audit Committee. The CFO submits requests or applications to provide services that the Audit Committee has not pre-approved, which must include an affirmation by the CFO and the independent accountants, that the request or application is consistent with the SEC's rules on auditor independence, to the Audit Committee (or its chairman or any of its other members pursuant to delegated authority) for approval.

As permitted under the Sarbanes-Oxley Act of 2002, the Audit Committee may delegate pre-approval authority to one or more of its members. Any service pre-approved by a delegate must be reported to the Audit Committee at the next scheduled quarterly meeting. The Audit Committee considered whether the provision of the auditors' services, other than for the annual audit and quarterly reviews, is compatible with its independence and concluded that it is compatible.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules

(a) Financial Statements

The following financial statements of Cytomedix, Inc. are included in ITEM 8:

(b) Exhibits

For a list of exhibits filed with this Form 10-K, refer to the Exhibit Index beginning on page 77.

SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CYTOMEDIX, INC.

By: */s/ Martin P. Rosendale*
Martin P. Rosendale
CEO and Director
(Principal Executive Officer)

Date: March 30, 2011

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: */s/ Martin P. Rosendale*
Martin P. Rosendale
CEO and Director

Date: March 30, 2011

/s/ Andrew S. Maslan
Andrew S. Maslan
Chief Financial Officer
(Principal Financial and Accounting Officer)

Date: March 30, 2011

/s/ James S. Benson
James S. Benson
Presiding Director and Acting Chairman of the Board

Date: March 30, 2011

/s/ David E. Jorden
David E. Jorden
Director

Date: March 30, 2011

/s/ Stephen N. Keith
Stephen N. Keith
Director

Date: March 30, 2011

/s/ Mark T. McLoughlin
Mark T. McLoughlin
Director

Date: March 30, 2011

/s/ Craig B. Mendelsohn
Craig B. Mendelsohn
Director

Date: March 30, 2011

/s/ C. Eric Winzer
C. Eric Winzer
Director

Date: March 30, 2011

Signed originals of this written statement have been provided to Cytomedix, Inc. and will be retained by Cytomedix, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT INDEX

Number	Exhibit Table
2.1	First Amended Plan of Reorganization with All Technical Amendments (previously filed on June 28, 2002, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
2.2	Amended and Restated Official Exhibits to the First Amended Plan of Reorganization of Cytomedix, Inc. with All Technical Amendments (previously filed on May 10, 2004, as exhibit to Form 10-QSB for the quarter ended March 31, 2004, File No. 000-28443, and incorporated by reference herein).
2.3	Asset Purchase Agreement by and among Sorin Group USA, Inc., Cytomedix Acquisition Company and Cytomedix, Inc, dated as of April 9, 2010 (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
3(i)	Restated Certificate of Incorporation of Cytomedix, Inc. (previously filed on November 7, 2002, as exhibit to Form 10-QSB for quarter ended June 30, 2001, File No. 000-28443, and incorporated by reference herein).
3(i)(1)	Amendment to Restated Certificate of Incorporation of Cytomedix, Inc. (previously filed on November 15, 2004, as exhibit to Form 10-QSB for quarter ended September 30, 2004, File No. 000-28443, and incorporated by reference herein).
3(i)(2)	Certificate of Amendment to the Certificate of Incorporation (previously filed on July 1, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
3(ii)	Restated Bylaws of Cytomedix, Inc. (previously filed on November 7, 2002, as exhibit to Form 10-QSB for quarter ended June 30, 2001, File No. 000-28443, and incorporated by reference herein).
4.1	Amended and Restated Certificate of Designation of the Relative Rights and Preferences of Series A Preferred, Series B Preferred and Common stock of Cytomedix, Inc. (previously filed on March 31, 2004, as exhibit to Form 10-KSB for year ended December 31, 2003, File No. 000-28443, and incorporated by reference herein).
4.2	Form of Class A Warrant issued to New Investors and DIP Lenders (previously filed on December 5, 2002, as exhibit to Form 10-QSB for quarter ended September 30, 2001, File No. 000-28443, and incorporated by reference herein).
4.3	Form of Class B Warrant issued to New Investors and DIP Lenders (previously filed on December 5, 2002, as exhibit to Form 10-QSB for quarter ended September 30, 2001, File No. 000-28443, and incorporated by reference herein).
4.4	Form of Series C-1 Warrant to Purchase Shares of Common stock of Cytomedix, Inc. (previously filed on March 29, 2004 as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein.)
4.5	Form of Series C-2 Warrant to Purchase Shares of Common stock of Cytomedix, Inc. (previously filed on March 29, 2004 as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
4.6	Certificate of Designation of the Relative Rights and Preferences of the Series C Convertible Stock of Cytomedix, Inc. as filed with the Delaware Secretary of State on March 25, 2004 (previously filed on March 29, 2004 as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
4.7	Form of warrant issued to investors in the 2004 Unit Offering (previously filed on May 11, 2004, as exhibit to the registration statement on Form SB-2, File No. 333-115364, and incorporated by reference herein).

Number	Exhibit Table
4.8	Form of Class D Warrant to Purchase Shares of Common stock of Cytomedix, Inc. (previously filed on May 2, 2005, as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
4.9	Form of Registration Rights Agreement between Cytomedix, Inc., and Class D Warrant holders (previously filed on May 2, 2005, as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
4.10	Form of Warrant (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
4.11	Certificate of Designation, Relative Rights and Preferences of the 10% Series D Convertible Preferred Stock (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
4.12	Form of Warrant (previously filed on October 8, 2010 as exhibit to the Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
10.1	Royalty Agreement, dated as of December 26, 2000, by and between Cytomedix, Inc. and Curative Health Services, Inc. (previously filed on January 17, 2001, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
10.2	First Amendment to Royalty Agreement, dated as of April 20, 2001, by and between Cytomedix, Inc. and Curative Health Services, Inc. (previously filed on May 25, 2001, as exhibit to the registration statement on Form SB-2/A, File No. 333-55818, and incorporated by reference herein).
10.3	Second Amendment to Royalty Agreement, dated as of December 5, 2002, by and between Cytomedix, Inc. and Curative Health Services, Inc. (previously filed on March 31, 2003, as exhibit to Form 10-KSB for year ended December 31, 2002, File No. 000-28443, and incorporated by reference herein).
10.4	Cytomedix, Inc. Long-Term Incentive Plan.*
10.5	License Agreement dated March 21, 2001, by and between Cytomedix, Inc. and DePuy AcroMed, Inc. (previously filed on April 16, 2001, as exhibit to Form 10-KSB for year ended December 31, 2000, File No. 000-28443, and incorporated by reference herein).
10.6	Amendment dated March 3, 2005, to the License Agreement by and between Cytomedix, Inc. and DePuy Spine, Inc. (f/k/a DePuy Acromed, Inc.) (previously filed on March 31, 2005, as exhibit to Form 10-KSB for year ended December 31, 2004, File No. 000-28443, and incorporated by reference herein).
10.7	Second License Agreement dated March 3, 2005, to the License Agreement by and between Cytomedix, Inc. and DePuy Spine, Inc. (f/k/a DePuy Acromed, Inc.) (previously filed on March 31, 2005, as exhibit to Form 10-KSB for year ended December 31, 2004, File No. 000-28443, and incorporated by reference herein).
10.8	Settlement and License Agreement dated May 1, 2005 by and between Cytomedix, Inc. and Medtronic, Inc. (previously filed on May 10, 2005, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
10.9	Settlement Agreement and License Agreement dated May 23, 2005, by and between Cytomedix, Inc., and Harvest Technologies Corporation (previously filed on May 27, 2005, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
10.10	Settlement and License Agreement dated June 26, 2005, by and between Cytomedix, Inc., and Perfusion Partners and Associates Inc. (previously filed on August 15, 2005, as exhibit to Form 10-QSB for the quarter ended June 20, 2005, File No. 000-28443, and incorporated by reference herein).

Number	Exhibit Table
10.11	License Agreement dated October 7, 2005, by and between Cytomedix, Inc., and COBE Cardiovascular, Inc. (previously filed on October 11, 2005, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).
10.12	Settlement and License Agreement dated October 12, 2005, by and between Cytomedix, Inc., and SafeBlood Technologies, Inc. (previously filed on November 9, 2005, as exhibit to Form 10-QSB, File No. 000-28443, and incorporated by reference herein).
10.13	Employment Agreement with Ms. Carelyn P. Fylling (previously filed on December 5, 2002, as exhibit to Form 10-QSB for quarter ended September 30, 2001, File No. 000-28443, and incorporated by reference herein).*
10.14	Employment Agreement with Kshitij Mohan, Ph.D., dated April 20, 2004 (previously filed on May 7, 2004, on Current Report on Form 8-K, File No. 00028443, and incorporated by reference herein).*
10.15	Termination Agreement between Cytomedix, Inc., and Kshitij Mohan, dated April 20, 2004 (previously filed on May 7, 2004, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).*
10.16	Employment Agreement dated June 3, 2005, by and between Cytomedix, Inc., and Andrew Maslan (previously filed on June 20, 2005, as exhibit to Current Report on Form 8-K, File No. 000-28443, and incorporated by reference herein).*
10.17	Distributor Agreement dated October 31, 2005 by and between Cytomedix, Inc. and National Wound Therapies, LLC. (previously filed on March 23, 2006, as exhibit to Form 10-KSB, File No. 001-32518, and incorporated by reference herein).
10.18	Settlement and License Agreement dated May 19, 2006, between Cytomedix, Inc., and Biomet Biologics, Inc. (previously filed on August 9, 2006, as exhibit to Form 10-Q, File No. 001-32518, and incorporated by reference herein).
10.19	First Addendum to Letter Agreement dated October 4, 2006, between Cytomedix, Inc., and Andrew Maslan (previously filed on November 1, 2006 as exhibit to Form 10-Q, File No. 001-32518, and incorporated by reference herein).*
10.20	License Agreement between Cytomedix, Inc., and Smith & Nephew, Inc. (previously filed on October 15, 2007 as exhibit to Current Report on Form 8-K, File No 001-32518, and incorporated by reference herein).
10.21	First Amendment to Employment Agreement by and between the Company and Kshitij Mohan (previously filed on January 29, 2008 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).*
10.22	Letter Agreement by and between the Company and Martin Rosendale, dated as of March 14, 2008 (previously filed on March 17, 2008 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein, and incorporated by reference herein).*
10.23	Kshitij Mohan Termination and Consulting Agreement (previously filed on June 10, 2008 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein, and incorporated by reference herein, and incorporated by reference herein).*
10.24	Form of Securities Purchase Agreement (previously filed on August 26, 2008 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein, and incorporated by reference herein).
10.25	Form Warrant (previously filed on August 12, 2009 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein, and incorporated by reference herein).
10.26	Form Securities Purchase Agreement (previously filed on August 12, 2009 as exhibit to Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).

Number	Exhibit Table
10.27	Form of Transition Agreement, dated as of April 9, 2010 (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
10.28	Form of Asset Transfer and Assumption Agreement, dated as of April 9, 2010 (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
10.29	Form of Subscription Agreement (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
10.30	Form of Registration Rights Agreement (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
10.31	Form of Promissory Note (previously filed on April 12, 2010 as exhibit to the Current Report on Form 8-K, File no. 001-32518, and incorporated by reference herein).
10.32	Flex Space Office Lease by and between Cytomedix, Inc. and Saul Holdings Limited Partnership, dated as of May 19, 2010 (previously filed on August 16, 2010, as exhibit to Form 10-Q for quarter ended June 30, 2010, File No. 001-32518, and incorporated by reference herein).
10.33	Form of the Purchase Agreement (previously filed on October 8, 2010 as exhibit to the Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
10.34	Form of the Registration Rights Agreement (previously filed on October 8, 2010 as exhibit to the Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
10.35	Form of the Securities Purchase Agreement (previously filed on October 8, 2010 as exhibit to the Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
10.36	Form of the Lincoln Purchase Agreement (previously filed on October 8, 2010 as exhibit to the Current Report on Form 8-K, File No. 001-32518, and incorporated by reference herein).
23.1	Consent of PricewaterhouseCoopers, LLP.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certificate of Chief Executive Officer pursuant to 18 U.S.C.ss.1350.
32.2	Certificate of Chief Financial Officer pursuant to 18 U.S.C.ss.1350.

* Indicates a management contract or compensatory plan or arrangement.

EX-23.1 5 v216377_ex23-1.htm
Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-168936), the Registration Statement on Form S-1 (No. 333-170747), and the Registration Statement on Form S-8 (No. 333-120141) of Cytomedix, Inc. of our report dated March 30, 2011 relating to the financial statements, which appears in this Annual Report on Form 10-K.

/s/ PricewaterhouseCoopers LLP

Baltimore, Maryland
March 30, 2011

EX-31.1 6 v216377_ex31-1.htm
Exhibit 31.1

CERTIFICATION

I, Martin P. Rosendale, certify that:

1. I have reviewed this Form 10-K of Cytomedix, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2011

/s/ Martin P. Rosendale
Martin P. Rosendale, Chief Executive Officer

A signed original of this written statement has been provided to Cytomedix, Inc. and will be retained by Cytomedix, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EX-31.2 7 v216377_ex31-2.htm
Exhibit 31.2

CERTIFICATION

I, Andrew S. Maslan, certify that:

1. I have reviewed this Form 10-K of Cytomedix, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2011

/s/ Andrew S. Maslan
Andrew S. Maslan, Chief Financial Officer

A signed original of this written statement has been provided to Cytomedix, Inc. and will be retained by Cytomedix, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EX-32.1 8 v216377_ex32-1.htm
Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. §1350

Pursuant to 18 U.S.C. §1350 and in connection with the Annual Report on Form 10-K of Cytomedix, Inc. (the "Company") for the fiscal year ended December 31, 2010 (the "Report"), I, Martin P. Rosendale, Chief Executive Officer of the Company, hereby certify that to the best of my knowledge and belief:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for said period.

Date: March 30, 2011

/s/ Martin P. Rosendale
Martin P. Rosendale
Chief Executive Officer

A signed original of this written statement has been provided to Cytomedix, Inc. and will be retained by Cytomedix, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EX-32.2 9 v216377_ex32-2.htm
Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. §1350

Pursuant to 18 U.S.C. §1350 and in connection with the Annual Report on Form 10-K of Cytomedix, Inc. (the "Company") for the fiscal year ended December 31, 2010 (the "Report"), I, Andrew S. Maslan, Chief Financial Officer of the Company, hereby certify that to the best of my knowledge and belief:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for said period.

Date: March 30, 2011

/s/Andrew S. Maslan
Andrew S. Maslan
Chief Financial Officer

A signed original of this written statement has been provided to Cytomedix, Inc. and will be retained by Cytomedix, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.