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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, 2008

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.)

416 Hungerford Drive, Suite 330
Rockville, MD 20850

(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, 2008 was approximately $22 million based on the closing sale price of the Common stock on the NYSE Amex (formerly the American Stock Exchange) 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. 33,973,201 shares of Common stock, par value $.0001, outstanding as of March 13, 2009.

DOCUMENTS INCORPORATED BY REFERENCE

None.

TABLE OF CONTENTS

CYTOMEDIX, INC.

TABLE OF CONTENTS

TABLE OF CONTENTS

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 416 Hungerford Drive, Suite 330, Rockville, MD 20850. 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 2008" mean the year ended December 31, 2008, 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.

TABLE OF CONTENTS

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. The Company's principal offices are located in Rockville, Maryland.

Financial Information About Segments and Geographic Regions

Cytomedix has only one operating segment and operates only in the United States. See Item 8, Financial Statements and Supplementary Data.

Business

Cytomedix is a biotechnology company that develops, sells, and licenses regenerative biological therapies, to primarily address the areas of wound care, inflammation, and angiogenesis. 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. The Company is also moving forward with the development of other product candidates in its pipeline. Most notably is its CT 112 product, an anti-inflammatory peptide, that has shown promise in pre-clinical testing, and for which the Company is currently preparing an Investigational New Drug ("IND") application for the FDA. Cytomedix sells its products primarily to health care providers in the United States and licenses its patents to surgical medical device suppliers in the United States.

AutoloGel™ System

Market

Cytomedix's AutoloGel™ System currently targets the chronic wound technology market, which the Company estimates to be a $2.2 billion market. Chronic, non-healing wounds typically arise from one of three etiologies: diabetic foot ulcers, venous leg ulcers, and pressure ulcers. The following table lists the incidence of these wound types:

Incidence of Chronic Wounds in the U.S.
(Number of Wounds in Millions)
Source: Advanced Wound Management: Healing and Restoring Lives; Advanced Medical Technology Association (AdvaMed), June 2006

	U.S.
Diabetic Foot Ulcers	1.5
Venous Leg Ulcers	2.5
Pressure Ulcers	2.0
Totals	6.0

The prevalence of chronic wounds in the U.S. is linked directly to increased aging demographics, vascular diseases, venous insufficiency, and excessive pressure and diabetic neuropathy. The prevalence of worldwide chronic wounds is estimated to be 18 million(5).

- Diabetic Foot Ulcers — According to the American Diabetes Association(1), there are approximately 20.8 million people with diabetes in the U.S., or 7% of the total population. It is estimated that 15% of these people with diabetes will develop a foot ulcer in their lifetime and that 14 – 24% of diabetic foot ulcers result in amputation.(2) Approximately 86,000 amputations per year occur due to these ulcers at an estimated amputation costs of $60,000 (2003 costs) per procedure(2), implying an aggregate cost of nearly $5.2 billion per year. The chances of a second amputation within 3 – 5 years may be as high as 50%, with a 5 year post-amputation mortality rate of 39 – 68%.(4)
- Venous Stasis Leg Ulcers — Venous leg ulcers are the most frequently occurring type of chronic wound. The prevalence rises dramatically with age, increasing to 1% of the population over age 60. It is estimated that treatment costs total between $2.5 to $3.5 billion annually (1998 costs) and a loss of 2 million workdays per year.(3)
- Pressure Ulcers — Over 2 million pressure ulcers occur each year with an annual cost greater than $1.3 billion (1994 costs). One study indicates that nearly 15% of hospitalized patients age 65 or older developed a pressure ulcer during a 5-day or longer stay. Furthermore, up to one-fifth of all home health service visits involve care of a pressure ulcer, and more than one-third of people with spinal cord injuries develop pressure ulcers.(3)

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(1) *http://www.diabetes.org* (2008).

(2) H.R 3203 Submitted to the House of Representatives (September 30, 2003).

(3) Advanced Wound Management: Healing and Restoring Lives; Advanced Medical Technology Association (AdvaMed) (June 2006).

(4) Reiber GE, Boyko EJ, Smith DG: Lower Extremity Foot Ulcers and Amputations in Diabetes. In*Diabetes in America*. 2nd ed., National Institutes of Health, NIDDK, NIH Pub No. 95-1468 (1995).

(5) Growth Factors: Indications, Products, and Markets; Kalorama Publications (October 2003).

Broadly, the Company divides this market into targeted 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.

The Company believes that the wound care market is generally complex and crowded with some products struggling to verifiably demonstrate clinical efficacy. Other commodity types of products have established habitual use patterns and provider contracts to encourage standardized use. 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. The Company will continue to position the AutoloGel™ System as a proven wound care alternative that facilitates the body’s natural healing abilities to address a large unmet clinical need.

FDA Clearance

In September 2007, the Company received FDA marketing clearance for its AutoloGel™ System. The indications for use are as follows:

> ***“The AutoloGel™ System is intended to be used at point-of-care for the safe and rapid preparation of platelet rich plasma (“PRP”) from a small sample of a patient’s own blood. Under the supervision of a healthcare professional, the PRP gel produced by the AutoloGel™ System is suitable for exuding wounds, such as leg ulcers, pressure ulcers, and diabetic ulcers and for the management of mechanically or surgically debrided wounds.”***

This clearance is a broad indication for use that encompasses many wound etiologies as well as debrided wounds. It is the Company’s belief that this also establishes Cytomedix as the only company with an FDA cleared PRP gel system specifically for use on chronic wounds.

The Company promotes the AutoloGel™ System within the FDA’s specific marketing clearance for the gel to be used as a wound dressing for the management of these wounds. However, Company-sponsored published and unpublished studies, including a prospective, multi-center, randomized, blinded, controlled, clinical trial (published in a peer reviewed medical journal), as well as other published data on traditional treatments and competing advanced treatments for diabetic foot ulcers, indicate increased wound healing with the use of AutoloGel™ as compared to a control. Increased healing is not specifically included in the FDA cleared indication. In the 510(k) process, the claim made by the Company was that its product is substantially equivalent to other products legally on the market and

therefore, the indication cleared was similar to that of other wound management products, which had not used healing as an endpoint.

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 will analyze data from 300 patients over a three year period, does not contain any specific inclusion/exclusion criteria other than following the FDA cleared Instructions for Use, consists of some simple diagnostic blood tests, and is estimated to cost approximately $500,000. However, the Company expects to offset a portion of these costs through future sales of the AutoloGel™ System to those sites participating in the TAPS program. In addition to laboratory tests, data describing the wound repair process will be gathered and analyzed. The Company expects to leverage the data generated from this study to use as a tool in its sales and marketing efforts. The Company has initiated the implementation of the TAPS program and is currently finalizing its roster of participating sites and obtaining the necessary Investigation Review Board ("IRB") approvals.

AutoloGel™ Efficacy Studies

Cytomedix has completed several efficacy studies for AutoloGel™. The primary study was its prospective, randomized, blinded, controlled, multi-center clinical trial completed in 2005, designed to demonstrate the efficacy and safety of its AutoloGel™ System for the treatment of non-healing diabetic foot ulcers (the "RCT"). Forty patients met the trial protocol. Analysis of the size of wounds in the study showed that 35 out of the 40 patients (88%) had wounds less than or equal to 7 square centimeters in area and 2 cubic centimeters in volume (the "Majority Wound Group"). In the Majority Wound Group, the healing rate for AutoloGel™ was 81.3% and that for the control group was 42.1%. The difference between these groups is statistically significant, with a p-value of 0.036. Within the full cohort of the 40 patients, 68.4% of the patients treated with AutoloGel™ achieved full wound closure versus 42.9% of those patients treated in the control group. Due to the small number of patients who met the protocol, the difference in wound closure rates (p-value of 0.125) did not reach statistical significance (p-value < 0.05).

The Company has completed several other prospective and retrospective case studies, wound registries, and/or non-randomized trials. The results of these studies demonstrate healing outcomes for AutoloGel™ consistent with the trend in the RCT described above.

Cytomedix believes that the efficacy of AutoloGel™ is directly linked to its formulation which includes specific centrifugation parameters, platelet concentrations, and other formulation enhancements, all of which enjoy patent protection through at least early 2019 in the United States and several other countries.

TABLE OF CONTENTS

Economic Study

In September 2007, B&D Consulting, an independent, national, advisory and advocacy firm located in Washington, DC, ("B&D") completed a Company-commissioned cost effectiveness analysis of AutoloGel™ as compared to certain alternative, advanced therapies for patients with diabetic foot ulcers (the "Economic Study"). Results of the Economic Study, as reported by the authors, show that AutoloGel™ demonstrates lower cost and better healing outcomes than the other therapies analyzed therein.

B&D developed the research methodology, model structure, assumptions, and inputs from the peer-reviewed literature, including the publication of Cytomedix's RCT. Cytomedix paid B&D a one-time, fixed fee for its work. This fee was not dependent on the results of the Economic Study.

The estimated 5-year average direct wound care costs (exclusive of lost work, disability, etc.; inclusive of recurrent wounds, amputations, etc.) when AutoloGel™ was used to treat the most commonly sized diabetic foot ulcers were approximately $15,000. This was markedly less than similar costs ranging from approximately $24,000 to $47,000 when either standard of care or advanced therapies were simulated. Furthermore, the model suggests a measurable increase in Quality Adjusted Life Years (a function of increased survival rates and fewer wound complications) when AutoloGel™ is used. Data from published articles of alternative treatments utilized in this model included such therapies as standard of care alone, tissue engineered grafts, ultrasound, single growth factor therapies, and negative pressure wound therapy. Therapies that did not have published, peer-reviewed studies of their use in diabetic foot ulcers, with full wound healing as the primary endpoint, were not considered in the Economic Study. This study was published in the journal *Advances in Skin and Wound Care* in December 2008.

Sales and Marketing

The Company's focus is currently on the targeted submarkets that have established payment pathways for our products. In the first quarter of 2008, it initiated a deliberate strategic launch designed to refine/improve the sales approach for the AutoloGel™ System and provide incremental investment in the sales and marketing efforts. Since that time, the Company's efforts have mostly been spent on filling open sales representative positions to provide territorial coverage, strengthening product positioning to promote the competitive advantages of AutoloGel™ as compared to competing technologies, addressing resistance to market acceptance through refinements to the sales process and incorporating significant clinical and scientific resources into its sales process.

Based on the experience and knowledge gleaned in 2008, the Company implemented a significantly revamped selling approach beginning in January 2009. This new approach focuses on the scientific mechanisms underpinning AutoloGel™, and leverages the Company's significant clinical expertise in chronic wound care. Part of this new sales approach includes heavy involvement by our clinical staff to assist prospective customers in conducting intensive on-site evaluations of AutoloGel™ and offering on-going support to existing customers in order to optimize healing outcomes. Although very early, this new approach is eliciting positive customer responses to the new messaging and tactics.

Within the current target market, Cytomedix has focused most of its attention within LTAC's and the VA Medical Centers. Its sales in 2008 were primarily generated from these facilities. In 2009, the Company will focus largely on executing its sales strategy within this subset of its current target market, and will also initiate efforts to obtain selected commercial insurance reimbursement and expand state Medicaid coverage. Regarding commercial insurance, the Company has received feedback from an outpatient clinic that the facility was successful at securing reimbursement from a third party payer and continues to submit claims for its use of the AutoloGel™ System, using an established commercial insurance code. The Company intends to leverage this positive experience in 2009 as it approaches other outpatient settings. Although commercial insurers, as part of their coverage determinations, may consider the non-coverage status with Medicare (see below), they are independent organizations and Cytomedix believes the data contained in the Economic Study and clinical data discussed above should be attractive to these payors. Regarding Medicaid, the Company currently enjoys coverage in Illinois and Minnesota, and may seek to expand that to other states where it has adequate sales representation.

TABLE OF CONTENTS

The Sales and Marketing department is currently comprised of a VP of Sales and Marketing, four regional sales representatives, and part-time support in the areas of product management and administration. In conjunction with the new, clinically intensive selling approach, the Company's VP of Professional Services, and two other clinical professionals, also devote the overwhelming majority of their time interfacing with existing and prospective customers on a clinician-to-clinician basis. The Company generally outsources graphic design and other marketing-related activities as well as reimbursement strategy consulting. The Company will continue to assess the feasibility of a strategic marketing or distribution partnership as a means of accelerating market penetration and product sales.

The Company has exhibited and presented at several trade shows and expects that to continue. Its sales efforts have also been supported by a focused print advertising and direct mail campaign. In addition, abstracts regarding the RCT and the Economic Study have been accepted for poster and/or oral presentations at various wound care meetings.

Medicare Reimbursement

In March 2008, the Centers for Medicare and Medicaid Services ("CMS") re-affirmed its 2003 decision of non-coverage for all PRP gel products, which would include AutoloGel™. Although the submarkets currently targeted by Cytomedix are significant, the Company believes the achievement of the full market potential of the AutoloGel™ System requires Medicare reimbursement. Therefore, it plans to continue to work with CMS and ultimately obtain a positive coverage decision.

The Company met with CMS in April 2008 to determine the optimal path forward for obtaining Medicare coverage for its AutoloGel™ System. The Company intends to continue this dialogue with CMS. Cytomedix has consulted with advisors to formulate a strategy to obtain Medicare coverage without conducting another trial under the same rigors, restrictions, and cost burden as its RCT completed in 2005. However, no assurance can be given that a second such trial will not be necessary, or that even if it was conducted, that the resulting data would be deemed sufficient by CMS to reverse its existing non-coverage determination. Furthermore, the Company believes that new data will likely be required by CMS to overturn its non-coverage decision, and that such new data, if generated by the Company, would require significant additional funding. The Company intends to request another meeting with CMS in mid 2009 to discuss more specifically the grounds on which it expects to seek coverage.

The Company is also seeking to build additional support for a favorable CMS decision by increasing the usage of AutoloGel™ in the marketplace through its sales and marketing efforts, expanding coverage by state Medicaid agencies (Illinois and Minnesota currently reimburse for AutoloGel™), seeking reimbursement from commercial third-party payors, and will consider other avenues as deemed appropriate.

Suppliers

The Company outsources manufacturing for all the components of the AutoloGel™ System. While the Company utilizes single suppliers for several components of AutoloGel™, such components 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.

The Company is working to improve the current AutoloGel™ System offering in order to provide a greater customer experience surrounding its recurring use. Product improvement initiatives are designed to create a more convenient and proprietary product design.

Competition

There are multiple wound care products across several categories, each of which may pose some form of competition to AutoloGel™. However, many of these products may also be viewed and used in a complementary fashion with AutoloGel™. A discussion of the competitive products follows below.

- *Wet to dry saline/gauze*— The clinician will apply a dry gauze cover to the wound and soak it in saline. When dry, the gauze adheres, and can be removed to debride the wound. Cytomedix estimates that a significant number of wounds are still managed with this inexpensive, long standing approach.
  Examples: Tyco, J&J gauze

TABLE OF CONTENTS

- *Advanced wound dressings*— These dressings are designed to interact with the wound characteristics. These dressings may provide a wound cover, debridement, absorption, delivery of moisture to the wound, etc. They typically use advanced materials or technology (e.g. foam, alginate, hydrocolloid, hydrogel) and may act as delivery systems for active ingredients (e.g. silver, iodine) These products seek to keep the wound moist, but not wet, and are also referred to as moist wound healing.
  Examples: Duoderm, Allevyn, Kaltostat, Tegaderm, Aquacel AG, Mepilex
- *Skin substitutes* — These include skin grafts or flaps, and biologically derived tissue or synthetic "skin" to replace the natural body cover. They are used frequently for burns and in selected chronic wounds to speed the process of wound healing. They tend to be used for large exposed areas, and the consequences of their failure to graft may prolong time to closure and be very expensive.
  Examples: Aloderm, Apligraf, Dermagraft
- *Wound devices* — Devices generally seek to circumvent deficiencies in the patients' ability to regulate the biological, physical or chemical environment in the wound bed to facilitate the healing process. Usually these products seek to enhance the natural healing response through active alteration of the body's regulation of heat, oxygen, electricity, pressure, or other homeostatic activity.
  Examples: Negative pressure wound therapy (e.g. VAC), hyperbaric oxygen, enzymatic debriding, electro stimulation, ultrasound (e.g. MIST)
- *PRP Gel* — Other platelet gel companies, many of whom have licensing agreements with Cytomedix, may pose a competitive threat in the future. To date, these companies are selling platelet gel mostly into the surgical markets (e.g. cardiovascular, orthopedic), but may also try to sell into the chronic wound care market. When compared to these products, Cytomedix's AutoloGel™ System has the smallest, most portable centrifuge with the fastest spin time (1 minutes compared to 13 – 20 minutes). This makes it possible to more easily use AutoloGel™ in a greater variety of health care settings (i.e. hospital, outpatient clinics, physicians offices, or long term care, long term acute care, and home health settings). In addition, it is a user-friendly system so multiple health care providers can process the gel, rather than specialty technicians. Other PRP systems generally require a larger blood draw, more detailed processing steps, and a longer spin time. While other platelet gel companies claim a larger growth factor and platelet count than at baseline, no studies exist that prove this is efficacious in chronic wounds. To date, Cytomedix's AutoloGel™ System is the only platelet gel system that has completed a prospective, randomized, controlled trial in humans in the U.S. and AutoloGel™ is the only PRP gel to enjoy FDA marketing clearance for use on chronic wounds. Furthermore, AutoloGel™'s patented formulation includes ascorbic acid, which aides in the formation of the collagen matrix and, as an anti-oxidant, scavenges free radicals, both important elements in the natural wound repair process.

Other Opportunities

The Company is seeking to identify other markets for its AutoloGel™ System. Process, formulation, and device improvements are expected to extend the Company's market reach. 510(k) submissions, later in 2009, for improvements in the AutoloGel™ System are expected to expand the cleared indicated uses and increase the markets accessible through promotional activities. In particular, the Company plans to seek 510(k) clearance for use of the AutoloGel™ System to create PRP for use in orthopedic indications. This clearance would be similar to that held by several of the Company's licensees who service the surgical market; these licenses expire in November 2009. The Company may seek strategic partnerships to leverage the additional healing properties that combination therapies may provide or as the best means to address the markets outside of chronic wounds. Other markets where AutoloGel™ may also be relevant are:

- Hair transplantation and/or hair growth
- Angiogenesis (the growth of new blood vessels)
- Application system for biologics, synthetics
- Delivery system for stem cells

Anti-inflammatory Peptide

The discovery of an anti-inflammatory peptide in the mid 1990s resulted during the research of platelet derived growth factors, which led to the development of the Company's AutoloGel™ System. Since then, there have been further advances in peptide manufacturing technology and the understanding of the science underpinning such compounds. In addition, there is an increasing demand for new pharmaceutical products, particularly for anti-inflammatory compounds.

In mid-2008, Cytomedix announced plans for entering the multi-billion dollar anti-inflammatory market with patent protected peptides derived from Platelet Factor 4, a growth factor released when blood platelets are activated. The Company's initial peptide (designated "CT-112") was discovered early in the research of platelet derived growth factors.

Pre-clinical animal studies have indicated that the CT-112 peptide may be active for the treatment of inflammatory diseases such as Rheumatoid Arthritis, Crohn's Disease, Tissue Reperfusion Injury and other related medical conditions. The studies further indicated that CT-112 may be administered orally, unlike other anti-inflammatory drugs currently on the market which are administered via injection or infusion.

The Company is considering Rheumatoid Arthritis ("RA") as the initial indication for CT-112, although it is evaluating other indications. The RA market is in excess of $12 billion annually, with three leading biologic products: Enbrel (Amgen and Wyeth Pharmaceuticals), Humira (Abbott Laboratories), and Remicade (Johnson & Johnson). Each one of these therapies is administered via injection or infusion and each has experienced serious adverse events.

In animal models, CT-112 was shown to reduce arthritis severity. It was shown to prevent bone and cartilage erosion, preserve joint architecture, and decrease the amount of plasma IL-1. Further, CT-112 was shown to be bio-available when administered orally which indicates that it may be administered as a pill. This could significantly ease the delivery to patients and is in contrast to existing, comparable therapies, many of which are injectibles.

Toxicology studies indicate that CT-112 is not mutagenic, with no significant toxicity in a number of animal studies; in fact it was well tolerated over a wide range of doses from low to high. The Company therefore believes that use of CT 112 may demonstrate an improved adverse effect profile compared to other therapies for RA.

The Company has manufactured the first lot of CT-112 active pharmaceutical ingredient ("API"). Anti-inflammatory activity of both orally and parenterally administered CT-112 has been confirmed in a rodent model of inflammation. Bio-analytical assay validation, formulation development and stability studies supportive of IND submissions are ongoing. The Company plans to submit the IND in the second quarter of 2009, and could quickly move into a Phase I clinical trial, provided it has the funding, which it estimates to be approximately an additional $500,000.

The Company will likely seek strategic partnerships for clinical development of CT-112. Such partnerships would likely be milestone based and may be restricted to single indications or single routes of administration.

The Company's CT-112 peptide is covered by composition and method patents through mid 2015 in the United States and mid 2014 in several European countries and Japan. Furthermore, the product meets all the criteria of the Patent Restoration Act and therefore the Company expects that the U.S. patent may be extended for an additional three to five years.

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.

Although Cytomedix makes every reasonable effort to protect its intellectual property, it may not be able to prevent misappropriation of its technology or deter others from developing similar technology not covered by

the Company's patents in the future. Furthermore, policing the unauthorized use of its intellectual property is difficult. Litigation necessary to enforce Cytomedix's rights could result in substantial costs and diversion of resources.

The Company is party to certain royalty agreements relating to its intellectual property under which it pays certain fees, as follows:

- Curative Health Services, Inc. is entitled to receive 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 Knighton Patent (U.S. patent 5,165,938), the patent underlying its licensing revenues.
- 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 30 domestic and international patents that generally fall into the following families:

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

The above patent families encompass the Company's AutoloGel™ System, 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. In 2009, the Company is planning to file at least several new provisional patent applications covering new inventions or improvements to existing patents.

Licensing

The Company has established its intellectual property rights arising from its process patents regarding the use of platelet releasates to heal damaged tissue. Over several years it has reached settlement and/or licensing agreements with numerous companies infringing or seeking to avoid infringement of the Company's patents as listed in the table below. The underlying patents expire in late November 2009.

Licensee	Date of Agreement	Date of Expiration[4]	Lump Sum[6]	On-going Royalty Percentage[2]
DePuy Spine, Inc.[1]	3/19/2001 3/4/2005	11/24/2009	$ 750,000	6.5%

Medtronic, Inc. (assigned to Arteriocyte Medical Systems, Inc. effective November 2007)	5/1/2005	11/24/2009	$ 680,000	7.5% on disposables
				1.5% on hardware
Harvest Technologies, Inc.	6/30/2005	11/24/2009	$ 500,000	7.5% on disposables
				1.5% on hardware
Perfusion Partners and Associates, Inc.	6/26/2005	11/24/2009	$ 250,000[3]	10.0%
COBE Cardiovascular, Inc.	10/7/2005	11/24/2009	$ 45,000	7.5% on disposables
				1.5% on hardware
SafeBlood Technologies, Inc.	10/12/2005	11/24/2009	$ 50,000[3]	8.0% to 9.0%
Biomet Biologics, Inc.[5]	5/19/2006	11/24/2009	$2,600,000	none
CellMedix, Inc.	11/28/2006	11/24/2009	$ 30,000	9.5%
Smith and Nephew, Inc.	10/15/2007	11/24/2009	$ 250,000	7.5%

(1) Cytomedix has two license agreements with DePuy Spine, Inc. The original license agreement is dated March 19, 2001, subsequently amended on March 3, 2005, and provides for the use of applications under Cytomedix patents in the fields of diagnostic and therapeutic spinal, neurosurgery and orthopedic surgery. The second license agreement is dated March 4, 2005, and applies to all fields not covered in the original license agreement as amended.

(2) Certain minimum royalties may apply to certain agreements and other royalty percentages may apply to future products covered under selected license agreements.

(3) Some of these amounts are payable over a period of time as defined in executed notes payable to Cytomedix.

(4) These dates reflect the expiration of the license in the U.S., which coincides with the expiration of the Knighton Patent in the U.S. In some cases, the licensing agreements applicable to territories outside the U.S. extend to the expiration of the patents in the respective foreign countries.

(5) The Settlement and License Agreement with Biomet Biologics, Inc. (“Biomet”) called for a $2.6 million payout from Biomet to Cytomedix. This payout took the form of $1.4 million payable upon execution of the agreement and $100,000 payable at the end of each of 12 consecutive quarters beginning with the quarter ending September 2006. These payments are not tied to any performance commitments by Cytomedix and are not dependent on Biomet sales.

(6) For DePuy, CellMedix, and Smith and Nephew, the lump sum payments represent up-front fees for the prospective period from contract execution through termination that are in addition to any ongoing royalty percentage. For all other licensees, the lump sum fees represent settlements for past patent infringement.

Government Regulation

Government authorities in the United States at the federal, state, and local levels extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution, sampling, marketing, and import and export of pharmaceutical products, biologics, and medical devices. The Company’s products and product candidates are subject to regulatory approval or clearance by the FDA prior to commercialization. Various federal, state, and local statutes and regulations also govern testing, manufacturing, safety, labeling, storage, and record-keeping related to such products and their marketing. Cytomedix would also be required to obtain regulatory approval from comparable agencies in foreign countries before

commercial marketing in those countries. Before a product candidate is approved by the FDA 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 requirements under these laws and regulations at any time during the product development process, approval process, or after approval, it may become subject to administrative or judicial sanctions. These sanctions could include the FDA’s 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 or criminal prosecution. Any agency enforcement action could have a material adverse effect on the Company.

Medical Device Regulation

The AutoloGel™ System and other devices that the Company may manufacture and distribute are subject to regulations by the Food and Drug Administration, including marketing clearance or approval, record-keeping requirements, good manufacturing practices and mandatory reporting of certain adverse experiences resulting from use of the devices, and certain state agencies. Labeling and promotional activities are also subject to regulation by the FDA and the Federal Trade Commission, in certain circumstances. Current FDA enforcement policy prohibits the marketing of approved medical devices for unapproved uses and the agency scrutinizes 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 generally obtain FDA clearance or approval. In the United States, medical devices are classified into one of three classes — Class I, II or III. The controls applied by the FDA to the different classifications are those believed by the FDA to be necessary to provide reasonable assurance that the device is safe and effective. 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 the 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 the FDA. Generally, Class III devices are limited to life-sustaining, life-supporting or implantable devices. The FDA inspects medical device manufacturers and has a broad authority to order recalls of medical devices, to 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 most medical devices intended for human use to file a notice with the 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.

If a product is Class III and does not qualify for the 510(k) process, then the FDA requires a pre-market approval ("PMA") application and approval before marketing can begin. 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, and certain commercially-available reagents (i.e. calcium chloride, ascorbic acid, ACD-A anticoagulant, and bovine thrombin). Each System component is a legally-marketed product that has been cleared by FDA. 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.

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 the 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 at 21 C.F.R. Part 812. To this end, the Company submitted an Investigational Device Exemption ("IDE") application to the FDA under these rules and obtained approval on March 5, 2004, thus allowing the Company to begin its clinical trial. Once the study was completed and 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.

As a manufacturer of medical devices, Cytomedix is also subject to and complies with good manufacturing practices of the Quality System Regulation in 21 C.F.R. Part 820 of the Food, Drug and Cosmetic Act.

Bio-Pharmaceutical Product Regulation

The Company's CT-112 product candidate and other bio-pharmaceuticals it may develop are also regulated by the 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 IND application for submission to the FDA. The IND must be accepted by the 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 the FDA, the product candidate can be studied in Phase I clinical trials. Certain preclinical tests must be conducted in compliance with the FDA's good laboratory practice regulations and the United States 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 protocol must be submitted to the FDA as part of the IND prior to beginning the trial. Each trial must be reviewed, approved, and conducted under the auspices of an 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, a small number of volunteers, typically healthy individuals, 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 typically 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 several 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 the 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, the FDA assigns a goal of 10 months from acceptance of the application to return of a first “complete response,” in which the FDA may approve the product or request additional information.

The submission of the application is no guarantee that the 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 the 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, the 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 the FDA.

Prior to granting approval, the FDA generally 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 the 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, the 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 the FDA’s review may range from a few months to many years.

If the 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 the FDA, including record keeping requirements, submitting periodic reports to the 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 the 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 the 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 the FDA and certain state agencies and are subject to periodic unannounced inspections by the 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 contraindications. Also, the 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.

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™. It therefore expends only limited amounts on research and development activities ("R&D"). While the Company will continue to focus its R&D activities on the improvement of its current product offering, to the extent possible, it will also direct resources to the continued development of CT-112 through a Phase I trial. In the future, Cytomedix intends to develop the technology underlying its broader patent portfolio.

Employees

As of this Annual Report, the Company had fifteen employees, including the Company's CEO, CFO, and VP of Professional Services. 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.

Changes in the Company's Executive Management

On June 5, 2008, Kshitij Mohan and the Company entered into a Termination and Consulting Agreement pursuant to which Dr. Mohan agreed, among other things, to step down as the Chief Executive Officer ("CEO") and Chairman of the Board of Directors and to become a consultant to the Company effective June 30, 2008. The terms and provisions of

this agreement are discussed in the Company's Current Report on Form 8-K filed with the SEC on June 10, 2008, which discussion is incorporated by reference herein.

Effective as of July 1, 2008, following Dr. Mohan's departure, the Board of Directors of the Company approved the appointment of Martin Rosendale as CEO of the Company. Prior to that appointment, Mr. Rosendale served as Executive Vice-President and Chief Operating Officer of Cytomedix. In connection with this employment, the Company and Mr. Rosendale entered into a letter agreement setting forth the terms of his employment with the Company. Such terms and provisions of the letter agreement and Mr. Rosendale's current compensation are outlined in ITEM 11 of this Annual Report.

TABLE OF CONTENTS

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.

There is Substantial Doubt As to the Company's Ability to Continue As a Going Concern

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. In addition, the Company's financial statements have been prepared on the assumption that it 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 the Company's ability to continue as a going concern. Accordingly, the Company 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 development of CT-112 beyond a Phase I clinical trial
- Develop additional new products and/or make improvements to existing products
- Conduct additional trial(s) to support efforts to obtain CMS reimbursement for its products
- Pursue existing and new claims covered by intellectual property owned or contemplated by the Company
- Sustain its corporate overhead requirements and hire and retain necessary personnel
- Pursue other potential attractive opportunities

Until the Company can generate a sufficient amount of product revenue to finance its cash requirements, which it may not accomplish, it expects to finance future cash needs primarily through offerings of its debt or equity securities, strategic collaborations, or government grants. The Company does not know whether additional funding will be available on acceptable terms, or at all. If the Company is not able to secure additional funding when needed, it may have to delay, reduce the scope of, or eliminate one or more of its programs. In addition, it may have to partner one or more of its technologies at an earlier stage of development, which could lower the economic value of those programs to the Company.

The Company's Independent Registered Public Accounting Firm Has Expressed Substantial Doubt About Our Ability to Continue as a Going Concern

The Company has received an audit report from its independent registered accounting firm containing an explanatory paragraph stating that its historical recurring losses from operations raise substantial doubt about the Company's ability to continue as a going concern.

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

The global economy is currently experiencing a significant economic downturn. Such a downturn could reduce demand for the Company's products, significantly jeopardizing the ability to achieve meaningful market penetration for AutoloGel™. This downturn could also affect potential strategic partners of Cytomedix, which in turn could make it much more difficult to execute a strategic collaboration, and therefore significantly jeopardize the Company's ability to fully develop CT-112. Global credit and capital markets have experienced unprecedented volatility and disruption. Cytomedix may be unable to obtain capital through issuance of its equity securities, a significant source of funding for the Company throughout its history. If it is unable to secure funding through strategic collaborations, equity investments, or debt financing, it may not be able to achieve profitability and could result in a cessation of operations.

TABLE OF CONTENTS

Business credit and liquidity have tightened in much of the world. Volatility and disruption of financial markets could limit Cytomedix customers' ability to obtain adequate financing or credit to purchase and pay for Cytomedix 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 the Company's suppliers' ability to supply sufficient quantities of product components in a timely manner, which could impair the Company's 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 the Company's 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 the Company's financial performance in the form of lower interest earned on investments and/or could result in losses of portions of principal in the Company's investment portfolio. While the Company's investment policy requires it 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.

The Company Will Be Subject to Additional Scrutiny by NYSE Amex for Continued Listing

As a NYSE Amex listed company, Cytomedix is required to comply with the continued listing criteria of the exchange. Maintaining stockholders' equity of at least $6 million for a company that has had operating losses in its most recent five fiscsal years is one of such listing criteria. Since the Company's stockholders' equity balance as of December 31, 2008 is approximately $3.1 million, there is no assurance that NYSE Amex will not consider initiating suspension or delisting procedures. Furthermore, if it does consider these actions, there is no assurance that the Company will be successful in presenting a plan of compliance evidencing the Company's strategy to regain compliance with all continued listing criteria, or, even if it does, the NYSE Amex accepts such plan and grants the Company a grace period to implement such plan. Still further, even if such grace period is granted, there is no assurance that the Company will execute its compliance plan as intended. If any of the above actions are taken, it could significantly reduce the active market for and liquidity of the Company's stock.

The Company Has Limited Sources of Working Capital

Because the Company was in bankruptcy in 2002 and due to the rights of some of the Company's preferred shareholders, the Company may not be able to obtain debt financing. All working capital required to implement the Company's business plan will be provided by funds obtained through offerings of its equity securities, and revenues generated by the Company. No assurance can be given that the Company will have revenues sufficient to support and sustain its operations or that it would be able to obtain equity financing in the current economic environment. To date, the overwhelming majority of the Company's revenues have been provided by its licensing agreements. These agreements expire at the end of 2009. This revenue stream will be lost and there is no assurance that the Company will be able to replace these revenues through product sales, new licensing agreements, or other sources. If the Company does not have sufficient working capital and is unable to generate revenues or raise additional funds, the Company may delay the completion of or significantly reduce the scope of its current business plan; delay some of its development and clinical or marketing testing, its plans to pursue Medicare and/or commercial insurance reimbursement for its wound treatment technologies; or postpone the hiring of new personnel; or, under certain dire financial circumstances, cease its operations.

The Company Has a History of Losses

The Company has a history of losses, is not currently profitable, and expects to incur substantial losses and negative operating cash flows for the foreseeable future. The Company may never generate sufficient revenues to achieve and maintain profitability. The Company expects its expenses will increase for the foreseeable future as it seeks to expand its operations, pursue development of its technologies, accelerate the achievement of sales revenues, implement internal systems and infrastructure, and hire additional personnel. These ongoing financial losses may adversely affect its stock price.

The Company Has a Short Operating History and Limited Operating Experience

The Company must be evaluated in light of the uncertainties and complexities affecting an early stage biotechnology company. The Company has only recently implemented its current business plan. Thus, the Company has a very limited operating history. Continued operating losses, together with the risks associated with the Company's ability to gain new customers for its product offerings may have a material adverse effect on the Company's liquidity. The Company may also be forced to respond to unforeseen difficulties, such as decreasing demand for its products and services, regulatory requirements and unanticipated market pressures. Since emerging from bankruptcy and continuing through today, the Company is developing a business model that includes protecting its patent position, addressing its third-party reimbursement issues, developing a sales and marketing program, and developing other technologies covered by, or derived from, its intellectual property. There can be no assurance that its business model in its current form can accomplish the Company's stated goals.

The Company's Intellectual Property Assets Are Critical to Its Success

The Company regards its patents, trademarks, trade secrets, and other intellectual property assets as critical to its success. The Company relies 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 its intellectual property. The Company attempts to prevent disclosure of its trade secrets by restricting access to sensitive information and requiring employees, consultants, and other persons with access to the Company's sensitive information to sign confidentiality agreements. Despite these efforts, the Company may not be able to prevent misappropriation of its technology or deter others from developing similar technology in the future. Furthermore, policing the unauthorized use of its intellectual property assets is difficult and expensive. Litigation has been necessary in the past and may likely be necessary in the future in order to protect the Company's intellectual property assets. Litigation could result in substantial costs and diversion of resources. The Company cannot assure that it will be successful in any litigation matter relating to its intellectual property assets. Continuing litigation or other challenges could result in one or more of its patents being declared invalid. In such a case, any royalty revenues from the affected patents would be adversely affected although the Company may still be able to continue to develop and market its products. Furthermore, the unauthorized use of the Company's patented technology by otherwise potential customers in its target market, may significantly undermine its ability to generate sales.

The Company's patent covering the specific gel formulation that is applied as part of the AutoloGel™ System (the "Worden Patent") expires no earlier than February 2019. The Company's U.S. Knighton Patent (which is the subject of

license agreements between the Company and Medtronic, Inc., DePuy Spine, Inc., Biomet Biologics, Inc., COBE Cardiovascular, Inc., and Harvest Technologies Corporation, among others) expires in November 2009. In 2008, the license agreements under the Knighton Patent accounted for approximately 95% of the Company's revenues. There is no assurance that the Company will obtain a significantly increased share of the wound care market prior to the expiration of the U.S. Knighton Patent in 2009, after which the Company may be more vulnerable to competitive factors because third parties will not then need a license from the Company to perform the methods claimed in the Knighton Patent.

The AutoloGel™ System and Components Are Subject to Governmental Regulation

The Company's success is also impacted by factors outside of the Company's control. The Company's 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, the Company's 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 the AutoloGel™ System is used could materially and adversely affect the Company's ability to sell products in those states. The FDA will require the Company 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.

The Company believes that the AutoloGel™ System and all Company products are legally marketed. The FDA has cleared the Company to market the AutoloGel™ System, including the Wound Dressing Kit and Centrifuge II, for use in exuding wounds such as leg ulcers, pressure ulcers, and diabetic ulcers, and the management of mechanically and surgically-debrided wounds.. As the Company expands and offers 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. The Company has no assurance that it 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 the Company's business and financial condition.

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

Clinical Trials May Fail to Demonstrate the Safety or Efficacy of the Company's Product Candidates

The Company's 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 the Company believes 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 the Company 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 the Company's 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

The Company's 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 the Company's regulatory requirements. In some service areas, certain healthcare providers may have a significant market presence. If healthcare providers refuse to contract with Cytomedix, use their market position to negotiate unfavorable contracts or place the Company at a competitive disadvantage, the Company's 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 the Company's ability to generate revenues or profits.

The Company's Sales and Marketing Strategy for Its AutoloGel™ System May Not Succeed

In January 2009, the Company implemented a revised sales and marketing strategy that focuses on intensive clinician to clinician interaction with both prospective and existing customers. There is no assurance that this approach will result in a significant increase in sales revenue, or that the Company, 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 the Company's 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

TABLE OF CONTENTS

will be reimbursed. With CMS's national non-coverage decision, the market for the AutoloGel™ System could be greatly restricted and it may be difficult, if not impossible, to sell AutoloGel™ in most care settings. This would hamper the Company's ability to grow its revenues and could reduce the likelihood that it will ever achieve sustainable profitability.

The Company's 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 decision for PRP gel, which would include AutoloGel™. Following CMS's decision, the Company met with CMS in April 2008 to discuss the optimal path for securing future coverage for AutoloGel™ and is currently working with consultants and advisors to develop a strategy to obtain Medicare reimbursement for AutoloGel™. While the Company is striving to obtain a positive coverage decision without undertaking a new randomized, controlled trial with the same rigors, restrictions, and costs of its previous RCT, there is no assurance that the Company will ultimately determine that this is the optimal route forward. If it chooses to undertake a new randomized, controlled trial, it could cost several millions of dollars and take multiple years to complete. The Company would likely need to obtain additional, outside financing to fund such a trial. Additionally, even if the Company develops a final strategy for obtaining Medicare reimbursement that does not require an RCT, there is no assurance that CMS will determine that the evidence is sufficient to reverse all or a portion of its existing non-coverage decision.

Clinical Trials May Fail to Demonstrate the Safety or Efficacy of CT-112 Peptides, Which Could Prevent or Significantly Delay Regulatory Approval and Prevent the Company From Raising Additional Financing

Based on the results of the pre-clinical animal studies done on the Company's CT-112 peptide, the Company plans to pursue further development of this product for the treatment of certain inflammatory diseases. All of the Company's product candidates, including CT-112 peptides, are subject to the risks of failure inherent in the development of bio-therapeutic products. The results of early-stage clinical trials of the Company's product candidates 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 Cytomedix believes the data collected from clinical trials of its product candidates is promising, this data may not be sufficient to support approval by the FDA or any other U.S. or foreign regulatory body. Pre-clinical and clinical data can be interpreted in different ways. Accordingly, FDA officials could reach different conclusions in assessing such data than does the Company, which could delay, limit or prevent regulatory approval. Any failure or delay in completing clinical trials for the Company's product candidates, or in receiving regulatory approval for the sale of any product candidates, has the potential to materially harm its business, and may prevent it from raising necessary, additional financing that it may need in the future. There is no assurance that the Company will obtain the necessary FDA approval of an IND in connection with the peptide and therefore may never be able to proceed with human clinical trials. Finally, there is no assurance that the Company will succeed in developing CT-112 as anticipated, that development of CT-112 will proceed according to the timeline planned by the Company or that the necessary additional capital and/or strategic partnership will be available on conditions acceptable to the Company.

The Company May Be Unable to Accurately Predict Its Royalty Revenues

While the Company currently has several primary licensing agreements that are expected to generate on-going royalty revenues through November 2009, the Company cannot currently reasonably predict the magnitude of those revenues. Royalty streams from these agreements are entirely dependent on the sales of its licensees and are therefore outside the control of Cytomedix. Past levels of royalty revenues from these agreements are not necessarily an indication of future activity. Unexpected fluctuations of such revenues may have a material adverse impact on the Company's operations.

The Success of the AutoloGel™ System Is Dependent on Acceptance by the Medical Community

The commercial success of the Company's 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, the Company's ability to sell the products and processes will

TABLE OF CONTENTS

be materially and adversely affected. While acceptance by the medical community may be fostered by broad evaluation via peer-reviewed literature, the Company may not have the resources to facilitate sufficient publication.

The Company May Be Unable to Attract and Retain Key Personnel

The future success of the Company depends on the ability to attract, retain and motivate highly skilled management, including sales representatives. The Company has retained a team of highly qualified officers and consultants, but the Company cannot provide assurance that it will be able to successfully retain all of them, or be successful in recruiting additional personnel as needed. The Company's inability to do so will materially and adversely affect the business prospects, operating results and financial condition. The Company's ability to maintain and provide additional services to its existing customers depends upon its 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; the Company competes with pharmaceutical, biotechnology and healthcare companies. The Company's inability to hire additional qualified personnel may lead to higher recruiting, relocation and compensation costs for such personnel. These increased costs may reduce the Company's profit margins or make hiring new personnel impractical.

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

Political, economic and regulatory influences may subject the health care industry in the United States to fundamental change. The Company cannot predict what other legislation relating to its 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 the Company's business, prospects, operating results and financial condition. The Company expects federal and state legislators to continue to review and assess alternative health care delivery and payment systems and possibly adopt legislation affecting fundamental changes in the health care delivery system. Such laws may contain provisions that may change the operating environment for its targeted customers including 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 the Company's 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 new presidential administration and Congress have previously expressed support for cost-containment measures, such as a universal health insurance program, that could have significant implications for healthcare therapies, including the Company's current and future products. If enacted and implemented, such measures could result in decreased revenue from the AutoloGel™ System and decrease potential returns from the Company's research and development initiatives.

The Company Could Be Affected by Malpractice Claims

Providing medical care entails an inherent risk of professional malpractice and other claims. The Company does not control or direct the practice of medicine by physicians or health care providers who use the products and does not assume responsibility for compliance with regulatory and other requirements directly applicable to physicians. The Company cannot assure that claims, suits or complaints relating to the use of the AutoloGel™ System and treatment administered by physicians will not be asserted against the Company in the future. The production, marketing and sale, and use of the AutoloGel™ System entail risks that product liability claims will be asserted against the Company. These risks cannot be eliminated, and the Company could be held liable for any damages that result from adverse reactions or infectious disease transmission. Such liability could materially and adversely affect the Company's business, prospects, operating results and financial condition. The Company currently maintains professional and product liability insurance coverage, but the Company cannot give assurance that the coverage limits of this insurance would be adequate to protect against all potential claims. The Company cannot assure that it 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.

TABLE OF CONTENTS

AutoloGel™ Has Existing Competition in the Marketplace

In the market for biotechnology products, the Company faces 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 the AutoloGel™ System. Biotechnology development projects are characterized by intense competition. Thus, the Company cannot assure any investor that it will be the first to the market with any newly developed products or that it will successfully be able to market these products. If the Company is not able to participate and compete in the regenerative biological therapy market, the Company's financial condition will be materially and adversely affected. The Company cannot assure that it 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 the Company's products.

The Company May Issue Additional Equity or Debt Securities Which May Materially and Adversely Affect the Price of Its Common Stock

Sales of substantial amounts of shares of the Company's common stock in the public market, or the perception that those sales may occur, could cause the market price of its common stock to decline. Cytomedix has used, and will likely continue to use, its 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 the Company's Common stock is trading at relatively low price levels, the price of its Common stock may be materially and adversely affected.

There Is a Limited Public Trading Market for the Company's Common Stock

The average daily trading volume in Cytomedix Common stock is relatively low. As long as this condition continues, it could be difficult or impossible 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. Stockholders may be required to hold shares of Cytomedix's Common stock for an indefinite period of time. In addition, sales of substantial amounts of Common stock could lower the prevailing market price of the Company's Common stock. This would limit or perhaps prevent the Company's ability to raise capital through the sale of securities. Additionally, the Company has 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, and especially in recent months, the stock market in general, and the market for life sciences companies in particular, have experienced significant price and volume fluctuations, and significant downward trends. 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 Cytomedix's common stock. These broad market fluctuations may reduce the demand for the Company's stock and therefore adversely affect the price of the Company's securities, regardless of operating performance.

The Company Is Subject to Anti-Takeover Provisions and Laws

Provisions in Cytomedix's 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 the Company without the approval of the Board of Directors. These provisions may make it more difficult or expensive for a third party to acquire a majority of the Company's outstanding voting Common stock or delay, prevent or deter a merger, acquisition, tender offer or proxy contest, which may negatively affect the 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. The Company's offices and storage facilities are located in Rockville, Maryland, comprise 3,100 square feet under an operating lease expiring December 31, 2009. See Note 16 to the Financial Statements.

TABLE OF CONTENTS

Item 3. Legal Proceedings

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

Item 4. Submission of Matters to a Vote of Security Holders

None.

TABLE OF CONTENTS

PART II

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

Market Information

Since June 2005, the Company's Common stock has been listed on the NYSE Amex (formerly the American Stock Exchange) under the symbol "GTF." Prior to that, the Common stock was quoted in the Over-the-Counter Bulletin Board ("OTC-BB") market under the symbol "CYME.OB." Set forth below are the high and low closing sale prices for the Common stock for each quarter in the two most recent fiscal years as reported by NYSE Amex.

Quarter Ended	High	Low
December 31, 2008	$ 0.84	$ 0.15
September 30, 2008	$ 0.90	$ 0.45
June 30, 2008	$ 1.09	$ 0.60
March 31, 2008	$ 2.04	$ 0.58
December 31, 2007	$ 5.25	$ 0.60
September 30, 2007	$ 3.95	$ 0.57
June 30, 2007	$ 1.32	$ 0.66
March 31, 2007	$ 1.98	$ 1.10

On March 13, 2009, the closing price of the Company's Common stock was $0.30.

Holders

There were approximately 675 shareholders of record of Common stock as of March 13, 2009.

Dividends

Cytomedix did not pay dividends to holders of Common stock in 2008 or 2007. The Company is prohibited from declaring dividends on Common stock if any dividends are due on shares of Series A, B, or C Convertible Preferred stock. If there are no unpaid dividends on shares of Series A, B, or C 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 2008.

Recent Sales of Unregistered Securities

The Company did not issue any unregistered securities during the last quarter of 2008.

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.

Currently, the Company's revenues are primarily earned through its licensing agreements. These revenues, net of related royalty and contingent legal fees, represent the primary source of cash from operations for the Company. Cash generated from the Company's licensing agreements is wholly dependent on covered sales generated by its licensees, which are entirely outside of the Company's control and the Company cannot provide any assurance that these levels will continue. These revenues, which constituted approximately 95% of the Company's revenues in 2008, will cease by the end of November 2009 as the underlying license agreements expire at that time.

Sales of the Company's products are currently very modest. In the first quarter of 2008, Cytomedix initiated a deliberate strategic launch designed to refine/improve the sales approach for the AutoloGel™ System and provide incremental investment in the sales and marketing efforts. Since that time, the Company's efforts have mostly been spent on filling open sales representative positions to provide adequate territorial coverage, strengthening product positioning to leverage the competitive advantages of AutoloGel™ as compared to competing technologies, identifying and responding to potential resistance to market acceptance, and refining the coordination of the Company's clinical and scientific personnel with its sales team. Based on the experience and knowledge gleaned in 2008, the Company implemented a significantly revamped selling approach beginning in January 2009. This new approach focuses on the scientific mechanisms underpinning AutoloGel™, and leverages the Company's significant clinical expertise in chronic wound care. Part of this new sales approach includes heavy clinical involvement by our staff to assist prospective customers in conducting intensive on-site evaluations of AutoloGel™ and offering on-going support to existing customers in order to optimize healing outcomes. Although very early, this new approach is eliciting positive customer responses to the new messaging and tactics. The Company continues to target selected submarkets, including the Veterans Administration and other government agency health facilities as well as capitated payment scheme environments such as long-term acute care facilities.

The Company's revenues are generally insufficient to cover its operating expenses. Operating expenses primarily consist of employee compensation, professional fees, consulting expenses, and other general business expenses such as insurance, rent, and sales and marketing related items. Cash outflows from operations generally result from operating expenses. These cash outflows have remained fairly stable over the past several quarters. The Company does not believe that historical results are indicative of future expense levels as such future expense levels will likely change as developments warrant. For example, the Company has begun further investment in its sales and marketing efforts in conjunction with clinically intensive sales approach previously discussed. Additionally, spending levels will be impacted by how aggressively the Company pursues other strategic initiatives such as the further development of its CT-112 anti-inflammatory peptide or other applications for AutoloGel™.

Comparison of Years Ended December 31, 2008 and 2007

Revenues

Revenues rose $147,000 (8%) to $2,091,000 comparing the year ended December 31, 2008, to the same period in the previous year. Revenues are normally generated from two sources: the sale of the disposable kits and reagents and royalties received from licensing activities. The increase was due to increased royalties of $107,000 and higher product sales of $40,000. Increases in royalties were due to stronger performance by the Company's licensees. Product sales modestly increased as the Company initiated a deliberate strategic launch of the AutoloGel™ System in early 2008 on the heels of FDA clearance of that product in late 2007.

Gross Profit

Gross profit rose $397,000 (36%) to $1,490,000 comparing the year ended December 31, 2008, to the same period in the previous year. For the same periods, gross margins rose to 71% from 56%. The increase in gross profits is attributable to improved margins and higher revenues. Gross margins on royalties improved due to reduced contingent legal fees pursuant to the Company's agreement with its patent counsel reached on August 2, 2007 (see Note 4 to the Financial Statements for a further discussion of this agreement). Gross margins on product sales declined to 83% due to a shift in mix; a mix the Company believes could be fairly representative of future sales.

Royalties from the licensing agreements with DePuy Spine, Inc., inclusive of the amortization of deferred revenue associated with the initial deposit of $750,000, generate a gross margin of approximately 20%. Royalties from the Arteriocyte Medical Systems, Inc. license agreement (assigned from Medtronic, Inc.) generate a gross margin of approximately 60%. Gross margins generated from all other licensing agreements are approximately 90%.

Operating Expenses

Operating expenses rose $2,938,000 (46%) to $9,384,000 comparing the year ended December 31, 2008, to the same

period in the previous year. A discussion of the various components of Operating expenses follows below.

Salaries and Wages

Salaries and wages rose $983,000 (60%) to $2,618,000 comparing the year ended December 31, 2008, to the same period in the previous year. The increase was primarily due to the accrual of the present value of a severance package for the former CEO ($510,000), increased equity-based compensation ($207,000), and more employees, partially offset by reduced bonus expense ($94,000) resulting primarily from the reversal of the bonus accrual of the former CEO.

Consulting Expenses

Consulting expenses rose $69,000 (28%) to $313,000 comparing the year ended December 31, 2008, to the same period in the previous year. The increase was primarily due to non-cash equity-based compensation expenses associated with the modification of some consultant warrants ($37,000), and the increase use of marketing consultants ($32,000) to assist in product messaging and commercial reimbursement strategy.

Professional Fees

Professional fees fell $2,095,000 (72%) to $834,000 comparing the year ended December 31, 2008, to the same period in the previous year. Professional fees consist primarily of legal and accounting services.

The decrease was primarily due to non-cash equity-based compensation ($1,721,000) to the Company's patent counsel, recorded in 2007, in exchange for a waiver of future contingent legal fee obligations on existing license agreements (see Note 4 to the Financial Statements for a further discussion of this agreement) and reduced audit fees ($406,000), as the Company incurred additional fees related to its financial restatements filed with the SEC in November 2007.

Trials and Studies

Trials and studies expenses rose $146,000, from zero, comparing the year ended December 31, 2008, to the same period in the previous year. These costs were associated with the Company's TAPS program (post-market surveillance study) ($41,000), which it began incurring in the third quarter of 2008, and costs

associated with development of its CT-112 anti-inflammatory peptide ($105,000), which it began incurring in the fourth quarter of 2008, as it prepares for submission of an IND in the first half of 2009. The Company estimates that the TAPS program will cost approximately $500,000 over the next three years, and it will cost approximately $600,000 to advance the CT-112 project through Phase I clinical trials.

General and Administrative Expenses

General and administrative expenses rose $291,000 (18%) to $1,930,000 comparing the year ended December 31, 2008, to the same period in the previous year. Increases in marketing ($137,000), travel ($124,000), recruiting fees ($58,000), and various other expenses, were partially offset by decreases in non-cash equity-based compensation to Directors and service providers ($143,000), and NYSE Amex filing fees ($39,000).

Impairment of Goodwill and Patents

Impairment of goodwill and patents expense was $3,543,000 for the year ended December 31, 2008. The impairment charge was due to the reduced value of the Company's intellectual property as a result of its negative cash flows and the substantial doubt as to its ability to continue as a going concern. There was no impairment charge in 2007.

Other Income

Other income fell $82,000 (26%) to $233,000 comparing the year ended December 31, 2008, to the same period in the previous year. The decrease was primarily due to lower Interest income ($140,000) earned on cash investments, partly offset by increased Patent litigation settlements ($60,000) resulting from a balloon payment to Cytomedix under an existing agreement which was accounted for on a cash basis due to the uncertainty of collectability.

Liquidity and Capital Resources

There exists substantial doubt that the Company will continue as a going concern. The Company believes that it has adequate cash to fund operations through the fourth quarter of 2009, however, this belief is based on the successful execution of its new sales strategy in the current market and resulting increase in revenue from product sales. Furthermore, there is no assurance that the Company will have adequate funding to enable it to operate beyond that point or to reach a point of self-sustainability without additional financing. The licensing agreements, under which the Company's royalty revenues are generated, expire in late November 2009. This revenue, which constituted approximately 95% of the Company's revenues in 2008, will cease at that time and there is no assurance that the Company will be able to replace this revenue through increased sales of its products or new license agreements.

Additional cash will likely be required for the Company to pursue all elements of its strategic plan. Specific programs that may require additional funding may include development of CT-112 beyond a Phase I trial, accelerated investment in the sales and marketing areas beyond what is currently forecasted, significant new product development or modifications, conduct of the trials the Company may deem necessary in order to obtain CMS coverage, and pursuit of certain other attractive opportunities for the Company. The Company is exploring potential strategic partnerships for some of these endeavors, which could likely provide a capital infusion to the Company. However, it may be necessary to partner one or more of the Company's 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 may also consider raising capital through the issuance of its equity securities, though this may result in significant dilution to its investors. The Company continuously assesses the state of the capital markets and its access to capital. It weighs the cost of capital and dilutive effects of equity issuance against the expected benefits of accelerating the pursuit of certain strategic objectives. The Company's ability to raise additional capital is dependent on the state of the financial markets at the time of any proposed offering. Given the current state of the financial markets, the likelihood of a capital raise may be significantly diminished. The Company is also exploring the possibility of obtaining grant funding for some of its on-going projects, but it is too early to determine whether these efforts are likely to be successful. Because the Company was in bankruptcy in 2002, the Company may not be able to obtain 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 would be materially negatively impacted.

TABLE OF CONTENTS

The Company has certain warrants that are callable, 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.

The Company has no material commitments for capital expenditures. The Company has begun implementation of a post-market surveillance study per its understanding reached with the FDA. The Company estimates that this new study will cost approximately $500,000 over the next three years, and of that amount, approximately $200,000 will be expended in the next 12 months.

Prospects for the Future

Cytomedix's success is directly dependent on its ability to generate sales of the AutoloGel™ System, and to further develop the other product candidates in its pipeline.

The Company believes that AutoloGel™ has a reasonable chance for success in the marketplace. First and foremost, the Company believes that, based on the results of the Company's clinical trial and other historical data as well as the results of a pharmaco-economic study, the AutoloGel™ System has higher healing rates for diabetic foot ulcers and is more cost effective than most other wound treatments. Additionally, the Company believes that AutoloGel™ offers similar clinical and cost advantages when used to treat other chronic and open cutaneous wounds. Although still very early, the Company's revised sales strategy, centered around heavy clinician to clinician interaction, is meeting with very positive response from potential and existing customers. However, given limited resources, sales increases are expected to be relatively incremental. The Company owns the patents on the process for utilizing platelet gel for treating damaged tissue and wound healing, which is the basis of its license agreements, through November 2009 and for the specific formulation of AutoloGel™, which it believes provides several competitive advantages, and which patents expire in 2019. The Company's also believes that the AutoloGel™ System is the only PRP gel system with a chronic wound indication from the FDA, thus affording another competitive advantage. While the existing CMS decision of non-coverage of autologous blood-derived products when used on chronic wounds will continue to restrict the Company's ability to target the entire wound care market, it will not have an impact on the Company's current sales and marketing strategy which targets selected sub-markets with established payment pathways for its products.

The Company believes that pre-clinical data on CT-112 is promising. The Company believes that the magnitude of the potential markets for CT-112, along with the potential competitive advantage over existing therapies, could make CT-112 an attractive partnering opportunity for well-established drug and biological therapy companies. Such partnerships could provide Cytomedix with initial and milestone-based capital infusions and on-going licensing revenues. However, the ability to secure such a partnership and the attractiveness of the terms to Cytomedix is in part a function of how far through development Cytomedix can take CT-112 on its own.

Cytomedix has other product candidates covered by its intellectual property that have various levels of data supporting their safety and efficacy. The Company is currently evaluating the relative opportunities of these product candidates and determining whether they warrant further pursuit that the current time.

While Cytomedix's technologies and opportunities are encouraging, the Company has limited resources, and is currently not self-sustaining. Given the economic conditions in the overall financial markets, the availability of capital on terms acceptable to the Company may be significantly diminished. The Company may therefore seek infusions of capital through strategic collaborations and/or place certain projects on indefinite hold in order to conserve cash.

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.

TABLE OF CONTENTS

Critical Accounting Policies

Valuation of Goodwill

The Company is required to perform a review for impairment of goodwill in accordance with Statement of Financial Accounting Standards ("SFAS") No. 142, *Goodwill and Other Intangible Assets*. 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.

Assessing the impairment of goodwill requires that the Company make assumptions and judgments regarding the fair value of its net assets. The Company completed its most recent annual evaluation for impairment of goodwill as of December 31, 2008 and determined that goodwill was fully impaired, resulting in an impairment charge of approximately $2.0 million in the fourth quarter of 2008. This determination was primarily attributable to the substantial doubt regarding the Company's ability to continue as a going concern, the fact that the Company continues to incur significant negative cash flows from operations, the significant decline in the Company's market capitalization, and the overall deterioration in the global economy and financial markets. This assessment was supported by the findings in the annual independent valuation that the Company commissioned as of December 31, 2008.

Valuation of Patents

The Company capitalizes the costs of purchased and internally developed patents. This cost is amortized via the straight-line method over the remaining life of the patents. The Company accounts for finite-lived intangibles under SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, 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.

The value of the Company's patents, determined upon fresh start accounting in 2002, was driven by the Worden patents, which cover the formulation of AutoloGel™ and expire in 2019. The value was being amortized via the straight-line method through 2019, and had an unamortized remaining value of approximately $1.5 million at December 31, 2008, prior to consideration of any impairments. Given the substantial doubt regarding the Company's ability to continue as a going concern and the fact that the Company continues to incur significant negative cash flows from operations, the Company identified that it may not realize the value of these patents and has concluded that their value has been fully impaired, resulting in a charge of approximately $1.5 million in the fourth quarter of 2008.

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.

For the years ended December 31, 2008 and 2007, the Company recognized $592,000 and $350,000, respectively, of compensation expense for stock issued and stock options granted under the LTIP. At December 31,

2008, there was $486,000 remaining in unrecognized compensation cost related to stock options under the LTIP, which is expected to be recognized over a weighted average period of one year.

The Company estimates the fair value of stock options on the date of grant using the Black-Scholes option-pricing method (Black-Scholes method). 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 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, 2008 and 2007, 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 vesting 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. For the years ended December 31, 2008 and 2007, the Company recognized $135,000 and $1,014,000, respectively, of compensation expense for warrants issued to service providers. At December 31, 2008, there was no remaining unrecognized compensation cost related to warrants.

Lump-sum Payments from Settlement Agreements

Under certain agreements, Cytomedix has been entitled to receive 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. If the lump-sum payment is deemed to be in settlement of prior infringement of Cytomedix's patents by the other party, then the lump sum, net of any associated fees, is recorded as non-operating income at its present value and reflected in the Patent litigation settlements, net line of the Statements of Operations.

The determination of whether a lump sum is associated with prior infringement or is part of an inducement to enter an agreement requires judgment by the Company. A number of factors must be considered including evidence of prior sales by the other party, nature of negotiations and/or court proceedings, and accounting treatment by the other party. Each agreement requires a unique assessment to determine the true nature of the lump sum payment. Further, any future lump sums deemed a settlement of past infringement will be reflected in Operating Income.

In 2008 and 2007, the Company recorded $71,000 and $11,000 (net of associated costs), respectively, in non-operating income associated with infringement settlements. In 2007, the Company added an additional $250,000 to deferred revenues to be recognized as revenue through November 2009.

Recent Accounting Pronouncements

On January 1, 2008, the Company adopted SFAS No. 157,*Fair Value Measurements* (“SFAS 157”), for financial assets and financial liabilities. SFAS 157 defines fair value, establishes a framework for measuring fair value under GAAP, and expands disclosures about fair value measurements. The Company does not believe that the partial adoption of SFAS 157 has had or will have a material impact on the Company’s financial statements. In February 2008, the Financial Accounting Standards Board (“FASB”) issued a FASB Staff Position (“FSP”), FSP SFAS 157-2, *Effective Date of FASB Statement No. 157*, to defer the effective date of SFAS 157 for nonfinancial assets and nonfinancial liabilities, except for items that are recognized or disclosed at fair value in the financial statements on a recurring basis. The FSP defers the effective date of SFAS 157 to

TABLE OF CONTENTS

fiscal years beginning after November 15, 2008. In October 2008, the FASB issued FSP SFAS 157-3,*Determining the Fair Value of a Financial Asset When the Market for That Asset Is Not Active*, to clarify the application of SFAS 157 in a market that is not active. The Company does not expect the adoption of FSP SFAS 157-2 or 157-3 to have a significant impact on the financial statements.

In December 2007, FASB issued SFAS No. 141R,*Business Combinations* (“SFAS 141R”), which impacts the accounting for business combinations. The statement requires changes in the measurement of assets and liabilities required in favor of a fair value method consistent with the guidance provided in SFAS 157 (see above). Additionally, the statement requires a change in accounting for certain acquisition related expenses and business adjustments which no longer are considered part of the purchase price. Adoption of this standard is required for fiscal years beginning after December 15, 2008. Early adoption of this standard is not permitted. The statement requires prospective application for all acquisitions after the date of adoption. However, the adoption of SFAS 141R is not expected to have a material impact on the Company’s 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.

TABLE OF CONTENTS

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 balance sheets and the related statements of operations, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Cytomedix, Inc. (the “Company”) at December 31, 2008 and December 31, 2007, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related financial statements. These financial statements and the financial statement schedule are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements and financial statement schedule 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.

McLean, Virginia
March 31, 2009

TABLE OF CONTENTS

CYTOMEDIX, INC.

BALANCE SHEETS

	December 31, 2008	December 31, 2007
ASSETS		
Current assets		
Cash	$ 4,027,026	$ 5,136,446
Accounts and royalties receivable, net	390,739	356,062
Patent settlements receivable, current portion	102,618	382,997
Prepaid expenses, inventory, and other current assets	190,720	238,148
Total current assets	4,711,103	6,113,653
Patent settlements receivable	—	193,978
Property and equipment, net	87,389	20,242
Patents, net	—	1,672,483
Goodwill	—	2,021,623
Total assets	$ 4,798,492	$ 10,021,979
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable and accrued expenses	$ 1,325,325	$ 948,297
Deferred revenues, current portion	197,344	215,285
Dividends payable on Series A and Series B preferred stock	7,243	14,050
Total current liabilities	1,529,912	1,177,632
Deferred revenues	—	197,344
Other liabilities	123,241	19,400
Total liabilities	1,653,153	1,394,376
Commitments and contingencies		
Stockholders' equity		
Series A Convertible preferred stock; $.0001 par value, authorized 5,000,000 shares; 2008 and 2007 issued and outstanding – 90,217 and 92,837 shares, respectively, liquidation preference of $90,217 and $92,837, respectively	9	9
Series B Convertible preferred stock; $.0001 par value, authorized 5,000,000 shares; 2008 and 2007 issued and outstanding – 92,300 and 85,405 shares, respectively, liquidation preference of $92,300 and $85,405, respectively	10	9
Series C Convertible preferred stock; $.0001 par value, authorized 1,000,000 shares; 2008 and 2007 issued and outstanding – 0.0 shares	—	—
Common stock; $.0001 par value, authorized 65,000,000 shares; 2008 issued and outstanding – 33,962,623 shares; 2007 issued and outstanding – 31,926,788 shares	3,396	3,193
Additional paid-in capital	42,219,802	40,026,574
Accumulated deficit	(39,077,878)	(31,402,182)
Total stockholders' equity	3,145,339	8,627,603
Total liabilities and stockholders' equity	$ 4,798,492	$ 10,021,979

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

TABLE OF CONTENTS

CYTOMEDIX, INC.

STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2008	2007
Revenues		
Sales	$ 100,983	$ 61,009
Royalties	1,989,754	1,882,269
Total revenues	2,090,737	1,943,278
Cost of revenues		
Cost of sales	16,764	5,864
Cost of royalties	584,256	844,421
Total cost of revenues	601,020	850,285
Gross profit	1,489,717	1,092,993
Operating expenses		
Salaries and wages	2,617,646	1,634,471
Consulting expenses	312,822	243,951
Professional fees	834,834	2,929,412

Trials and studies	145,713	—
General and administrative expenses	1,929,551	1,638,156
Impairment of goodwill and patents	3,543,205	—
Total operating expenses	9,383,771	6,445,990
Loss from operations	(7,894,054)	(5,352,997)
Other income		
Interest income, net	156,609	296,880
Other gain	5,350	7,078
Patent litigation settlements, net	71,346	11,170
Total other income	233,305	315,128
Loss before provision for income taxes	(7,660,749)	(5,037,869)
Income tax provision	—	—
Net loss	(7,660,749)	(5,037,869)
Preferred dividend on:		
Series A preferred stock	7,773	26,121
Series B preferred stock	7,174	6,707
Net loss to common stockholders	$ (7,675,696)	$ (5,070,697)
Loss per common share – Basic and diluted	$ (0.24)	$ (0.17)
Weighted average shares outstanding – Basic and diluted	32,515,784	29,822,574

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

TABLE OF CONTENTS

CYTOMEDIX, INC.

STATEMENTS OF STOCKHOLDERS' EQUITY

	Series A Preferred		Series B Preferred		Common Stock		Additional Paid-in Capital	Subscriptions Receivable	Accumulated Deficit	Total Stockholders Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2006	365,970	$ 37	83,431	$ 8	28,987,670	$2,899	$35,471,569	$ (620,000)	$(26,331,485)	$ 8,523,028
Common stock issued upon conversion of Series A stock	(303,301)	(31)	—	—	95,969	10	21	—	—	—
Common stock issued upon conversion of Series B stock	—	—	(4,872)	—	1,624	—	—	—	—	—
Dividend issued on Series A and Series B stock	30,168	3	6,846	1	—	—	37,010	—	—	37,014
Common stock issued upon exercise of Class C-2 warrants	—	—	—	—	105,000	11	157,489	—	—	157,500
Common stock to be released upon full payment of Class C-2 warrants exercised	—	—	—	—	750,000	75	1,124,925	(843,750)	—	281,250
Common stock issued upon exercise of Long-term Incentive Plan options	—	—	—	—	72,025	7	10,993	—	—	11,000
Common stock issued upon exercise of Unit Offering warrants	—	—	—	—	12,500	1	18,749	—	—	18,750
Common stock issued upon exercise of other warrants	—	—	—	—	602,000	60	661,940	—	—	662,000
Common stock issued to outside patent counsel for waiver of future contingent legal fees	—	—	—	—	1,300,000	130	1,143,870	—	—	1,144,000
Proceeds from amendment to terms of consultant warrant agreement	—	—	—	—	—	—	35,000	—	—	35,000
Collections on subscriptions receivable	—	—	—	—	—	—	—	1,463,750	—	1,463,750
Stock-based compensation related to options and warrants issued for services rendered by –										
Employees and Directors	—	—	—	—	—	—	350,042	—	—	350,042
Other parties	—	—	—	—	—	—	1,014,966	—	—	1,014,966
Net loss	—	—	—	—	—	—	—	—	(5,070,697)	(5,070,697)
Balance at December 31, 2007	92,837	$ 9	85,405	$ 9	31,926,788	$3,193	$40,026,574	$ —	$(31,402,182)	$ 8,627,603

CYTOMEDIX, INC.

STATEMENTS OF STOCKHOLDERS' EQUITY – (continued)

	Series A Preferred		Series B Preferred		Common Stock		Additional Paid-in Capital	Subscriptions Receivable	Accumulated Deficit	Total Stockholders Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Common stock issued upon conversion of Series A stock	(17,479)	(1)	—	—	5,827	—	1	—	—	—
Dividend issued on Series A and Series B stock	14,859	1	6,895	1	—	—	21,752	—	—	21,754
Common stock issued pursuant to registered direct offering completed in Third Quarter 2008	—	—	—	—	2,000,008	200	1,445,114	—	—	1,445,314
Common stock issued in lieu of cash for fees earned by advisors	—	—	—	—	30,000	3	11,997	—	—	12,000
Stock-based compensation related to options and warrants issued for services rendered by –										
Employees and Directors	—	—	—	—	—	—	579,699	—	—	579,699
Other parties	—	—	—	—	—	—	134,665	—	—	134,665
Net loss	—	—	—	—	—	—	—	—	(7,675,696)	(7,675,696)
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

CYTOMEDIX, INC.

STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2008	2007
Cash Flows From Operating Activities:		
Net loss	$(7,660,749)	$(5,037,869)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	170,767	157,927
Stock-based compensation – consultants and other	134,665	1,014,966
Stock-based compensation – employees and directors	579,699	350,042
Stock issued to outside patent counsel	—	981,480
Stock issued for consulting services	12,000	—
Gain on disposal of assets	(5,300)	(1,600)
Impairment of goodwill and patents	3,543,205	—
Change in accounts and royalties receivable, net	245,702	192,207
Change in other current assets	47,428	(28,677)
Change in patent settlements receivable	193,978	380,094
Change in accounts payable and accrued expenses	377,028	(190,818)
Change in deferred revenues	(215,285)	121,254
Change in other liabilities	103,841	(80,100)
Net cash used in operating activities	(2,473,021)	(2,141,094)
Cash Flows From Investing Activities		
Purchase of equipment	(87,013)	(15,509)
Proceeds from sale of equipment	5,300	1,600
Net cash used in investing activities	(81,713)	(13,909)
Cash Flows From Financing Activities:		
Proceeds from sale of common stock, net	1,445,314	620,000
Proceeds from option and warrant exercises	—	1,974,250
Proceeds from amendment of warrant terms	—	35,000
Net cash provided by financing activities	1,445,314	2,629,250
Net increase (decrease) in cash	(1,109,420)	474,247
Cash, beginning of period	5,136,446	4,662,199
Cash, end of period	$ 4,027,026	$ 5,136,446

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 1 — Description of the Business

Cytomedix is a biotechnology company that develops, sells, and licenses regenerative biological therapies, to primarily address the areas of wound care, inflammation, and angiogenesis. 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. The Company is also moving forward with the development of other product candidates in its pipeline. Most notably is its CT112 product, an anti-inflammatory peptide, that has shown promise in pre-clinical testing, and for which the Company is currently preparing an Investigational New Drug application for the FDA. Cytomedix sells its products primarily to health care providers in the United States and licenses its patents to surgical medical device suppliers in the United States. The Company was incorporated in the State of Delaware on April 29, 1998, and has its headquarters in Rockville, Maryland.

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. In addition, the Company needs to obtain increased product sales and additional capital to continue its business operations and fund deficits in operating cash flow. The Company is currently executing a new sales strategy, but it is difficult to forecast the success of this new strategy in the current market. The Company also plans to obtain additional capital to finance the development of its business operations, although there is no assurance that such capital will be available on acceptable terms or at all. The Company may seek additional capital through strategic collaborations, issuance of its equity securities, grant funding, or any other means it deems appropriate. 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 increase product sales 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, in the event new financing is not obtained, the Company will likely reduce general and administrative expenses, delay new product development efforts, and/or reduce spending on sales and marketing activities until it is able to obtain sufficient financing to do so.

The balance sheets 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. Certain financial information is based on fresh-start accounting utilized upon the Company's emergence from bankruptcy in July 2002.

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.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

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

Concentration of Risk

Approximately $1.5 million and $1.6 million, or 72% and 81% of the Company's revenue in the years ended December 31, 2008 and 2007 respectively, were generated from royalties from three licensees. By licensee, these percentages were as follows:

	2008	2007
Company A	18%	26%
Company B	28%	26%
Company C	26%	29%

Should any of these licensees experience a significant decrease in the sales of products covered by its license agreement with Cytomedix, there may be a material adverse effect on Cytomedix's results of future operations. Furthermore, the license agreements are set to expire in late November 2009 and therefore will not generate any revenue beyond that point.

As of December 31, 2008 and 2007, the Company maintained approximately $0 and $602,000 respectively, in financial institutions in excess of Federal Deposit Insurance Corporation ("FDIC") insurance. In addition, approximately $3,431,000 and $4,115,000 held in money market accounts at brokerage firms were in excess of Securitites Investor Protection Corporation ("SIPC") coverage as of December 31, 2008 and 2007, respectively. These amounts not

covered by SIPC were 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.

The Company currently has one product that is 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. While the Company utilizes single suppliers for several components of the 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 exclusively of finished goods. Cost is determined on a first-in-first-out basis. The Company's primary product is a kit, composed of multiple items. Certain items within the kits have shelf lives of approximately two years. The Company also

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

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

maintains an inventory of reagents that have shelf lives that generally range from ten months to two 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 four years for all assets except for furniture which is depreciated over seven years. Maintenance and repairs are charged to operations as incurred. When assets are sold, or otherwise 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.

Intangible Assets

The Company capitalizes the costs of purchased and internally developed patents. This cost is amortized via the straight-line method over the remaining life of the patents. The Company accounts for finite-lived intangibles under Statement of Financial Accounting Standards ("SFAS") No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, 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. The Company follows the guidance of SFAS No. 142, *Goodwill and Other Intangible Assets* ("SFAS 142"), with regard to its indefinite-lived intangibles. SFAS 142 requires that goodwill be assessed at least annually for impairment by applying a fair value based test. This evaluation has been performed for 2008 and 2007, based on the Market and Income Approaches. In the event these analyses indicate an impairment, the Company would record an impairment loss, if any, based on the fair value of the assets. As of December 31, 2008, the Company determined that the full value of its Goodwill and Patents were impaired, and took impairment charges totaling approximately $3.5 million. No impairment of intangible assets was recorded in 2007. See Note 9 for a further explanation.

Income Taxes

Deferred income taxes reflect the net tax effects of net operating loss carryforwards and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, using enacted tax rates in effect for the year in which the differences are expected to reverse. No provision for income taxes has been recorded as there are no taxes payable due to the Company's significant net operating loss carryforwards. Because the Company has determined that the realization of future benefit from the net operating losses is not assured, the Company has reserved for the entire remaining benefit.

As of January 1, 2007, the Company adopted FASB Interpretation No. 48,*Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109* ("FIN 48"), which clarifies the accounting and disclosure for uncertainty in tax positions, as defined. Pursuant to FIN 48, 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 2007 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 pursuant to FIN 48. In addition, the Company did not record a cumulative effect adjustment related to the adoption of FIN 48.

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.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

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

Revenue Recognition

The Company recognizes revenue in accordance with SEC Staff Accounting Bulletin No. 104,*Revenue Recognition in Financial Statements* ("SAB 104"), as amended. SAB 104 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.

Revenue from the sale of the Company's products to distributors and caregivers is recognized upon shipment of product to customer. The Company does not maintain a reserve for returned products as, historically, these amounts have been negligible.

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 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. If the lump-sum payment is deemed to be in settlement of prior infringement of Cytomedix's patents by the other party, then the lump sum, net of any associated fees, has been recorded as Other income at its present value and reflected in the Patent litigation settlements, net line of the Statements of Operations. Any future lump sums deemed a settlement of past infringement will be reflected in operating income. The Company records revenue and settlement income related to its agreement with Perfusion Partners Associates, Inc. ("PPAI") on the cash basis due to PPAI's recent emergence from bankruptcy at the time 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 13). In some cases, it has issued warrants to service providers outside the LTIP (see Note 12). The Company issues new shares of its Common stock when employees or service providers exercise options or warrants.

The Company adopted SFAS No. 123R, *Share-Based Payment* ("SFAS 123R"), 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 SFAS 123R. 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.

The Company recorded approximately $726,000 and $2,346,000 in expense associated with stock-based payments for the years ended December 31, 2008 and 2007, respectively. Of these amounts, $580,000 and $350,000, related to employee and director stock-based compensation for the same periods, respectively.

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

	2008	2007
Risk free rate	2.96%	4.86%
Expected years until exercise	6.0	8.6
Expected stock volatility	125%	111%
Dividend yield	—	—

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

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

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 as Cytomedix's history is limited. 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

warrants issued to service providers utilizes the same methodology 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.

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 SFAS No. 128,*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:

	2008	2007
Options	4,020,388	3,294,687
Warrants	5,353,172	4,385,433
Series A Preferred Stock	30,072	30,946
Series B Preferred Stock	30,767	28,468
	9,434,399	7,739,534

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 employer matching contributions, which also vest immediately. This plan is designated as a "Safe Harbor" plan. During 2008 and 2007, the Company contributed approximately $42,000 and $39,000 in cash to the plan.

Fair Value of Financial Instruments

The carrying value of current assets and liabilities approximates fair value due to their relatively short maturities.

Recent Accounting Pronouncements

On January 1, 2008, the Company adopted SFAS No. 157,*Fair Value Measurements* ("SFAS 157"), for financial assets and financial liabilities. SFAS 157 defines fair value, establishes a framework for measuring fair value under GAAP, and expands disclosures about fair value measurements. The Company does not believe that the partial adoption of SFAS 157 has had or will have a material impact on the Company's financial statements. In February 2008, the Financial Accounting Standards Board ("FASB") issued a FASB Staff Position ("FSP"), FSP SFAS 157-2, *Effective Date of FASB Statement No. 157*, to defer the effective date of SFAS 157 for nonfinancial assets and nonfinancial liabilities, except for items that are recognized or disclosed

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

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

at fair value in the financial statements on a recurring basis. The FSP defers the effective date of SFAS 157 to fiscal years beginning after November 15, 2008. In October 2008 the FASB issued FSP SFAS 157-3, *Determining the Fair Value of a Financial Asset When the Market for That Asset Is Not Active*, to clarify the application of SFAS 157 in a market that is not active. The Company does not expect the adoption of FSP SFAS 157-2 or 157-3 to have a significant impact on the financial statements.

In December 2007, FASB issued SFAS No. 141R,*Business Combinations* ("SFAS 141R"), which impacts the accounting for business combinations. The statement requires changes in the measurement of assets and liabilities required in favor of a fair value method consistent with the guidance provided in SFAS 157 (see above). Additionally, the statement requires a change in accounting for certain acquisition related expenses and business adjustments which no longer are considered part of the purchase price. Adoption of this standard is required for fiscal years beginning after December 15, 2008. Early adoption of this standard is not permitted. The statement requires prospective application for all acquisitions after the date of adoption. However, the adoption of SFAS 141R is not expected to have a material impact on the Company's financial statements.

Note 4 — 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 have been achieved and/or licenses have been granted to these companies resulting in a royalty stream for Cytomedix.

A table of the Company's primary settlement and license agreements, where it serves as licensor, follows below:

Licensee	Date of Agreement	Date of Expiration[4]	Lump Sum[6]	On-going Royalty Percentage[2]
DePuy Spine, Inc.[1]	3/19/2001 3/4/2005	11/24/2009	$ 750,000	6.5%

Medtronic, Inc. (assigned to Arteriocyte Medical Systems, Inc. effective November 2007)	5/1/2005	11/24/2009	$ 680,000	7.5% on disposables
				1.5% on hardware
Harvest Technologies, Inc.	6/30/2005	11/24/2009	$ 500,000	7.5% on disposables
				1.5% on hardware
Perfusion Partners and Associates, Inc. (“PPAI”)	6/26/2005	11/24/2009	$ 250,000[3]	10.0%
COBE Cardiovascular, Inc.	10/7/2005	11/24/2009	$ 45,000	7.5% on disposables
				1.5% on hardware
SafeBlood Technologies, Inc.	10/12/2005	11/24/2009	$ 50,000[3]	8.0% to 9.0%
Biomet Biologics, Inc.[5]	5/19/2006	11/24/2009	$2,600,000	none
CellMedix, Inc.	11/28/2006	11/24/2009	$ 30,000	9.5%
Smith and Nephew, Inc.	10/15/2007	11/24/2009	$ 250,000	7.5%

(1) Cytomedix has two license agreements with DePuy Spine, Inc. The original license agreement was dated March 19, 2001, subsequently amended on March 3, 2005, and provides for the use of applications under Cytomedix patents in the fields of diagnostic and therapeutic spinal, neurosurgery and orthopedic surgery. The second license agreement is dated March 4, 2005, and applies to all fields not covered in the original license agreement as amended.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 4 — Patent Settlement and License Agreements – (continued)

(2) Certain minimum royalties may apply to certain agreements and other royalty percentages may apply to future products covered under selected license agreements.

(3) Some of these amounts are payable over a period of time as defined in executed notes payable to Cytomedix.

(4) These dates reflect the expiration of the license in the U.S., which coincides with the expiration of the Knighton Patent in the U.S. In some cases, the licensing agreements applicable to territories outside the U.S. extend to the expiration of the patents in the respective foreign countries.

(5) The Settlement and License Agreement with Biomet Biologics, Inc. (“Biomet”) called for a $2.6 million payout from Biomet to Cytomedix. This payout took the form of $1.4 million payable upon execution of the agreement and $100,000 payable at the end of each of 12 consecutive quarters beginning with the quarter ending September 2006. These payments are not tied to any performance commitments by Cytomedix and are not dependent on Biomet sales.

(6) For DePuy, CellMedix, and Smith and Nephew, the lump sum payments represent up-front fees for the prospective period from contract execution through termination that are in addition to any ongoing royalty percentage. For all other licensees, the up-front fees represent settlements for past patent infringement.

Under the terms of the respective agreements, lump sum payments of approximately $1,030,000 representing up-front fees to the Company were received. These up-front fees were recorded as deferred revenue and are being amortized to revenue over the life of the respective licensing agreements.

The Company was also due lump sums totaling $4,125,000 for the discharge of past obligations relating to infringement of the Company’s patents. These settlements are one-time, non-recurring transactions. Amounts related to these settlements that are payable to the Company over time are reflected as “Patent settlements receivable, current portion” and “Patent settlements receivable” on the Balance Sheet for their current and long-term portions respectively. Associated costs, consisting of royalty and contingent legal fees payable upon the collection of such receivables, are reflected in “Accounts payable and accrued expenses” and “Other liabilities” on the Balance Sheet, for their current and long-term portions, respectively.

Income related to the settlement of these past obligations, net of associated costs, are reflected as “Patent litigation settlements, net” on the Statements of Operations as follows:

	2008	2007
Income	$ 82,000	$ 29,000
Costs	(11,000)	(18,000)
Net settlement income	$ 71,000	$ 11,000

Due to PPAI’s recent emergence from bankruptcy, the Company records revenue when payments are received from PPAI. As of December 31, 2008, the Company had received the full $250,000 settlement for past obligations from PPAI.

Certain licensees are also required to pay on-going royalties on defined classes of sales. Royalties earned after the effective dates of these agreements, together with the related costs, are included in the Statements of Operations as “Royalties” and “Cost of royalties,” respectively.

Through August 2, 2007 the Company’s ongoing patent enforcement strategy was being conducted on a full

contingency basis by the law firms Fitch, Even, Tabin & Flannery and Robert F. Coleman and Associates under a three party retainer agreement. As of that date, the Company agreed with these firms to issue equity and other compensation in return for a full waiver of all past and future contingent fees that would be due under this agreement and also agreed to the basic terms of a new retainer agreement. The Company issued 1.3 million shares of its Common stock and warrants to purchase an additional 975,000 shares, to these firms (see Note 12). In conjunction with the stock and warrants, the Company recorded approximately $1,721,000, as

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 4 — Patent Settlement and License Agreements – (continued)

Professional fees in the Statement of Operations in the third quarter of 2007. The Medtronic license agreement was handled under a separate three party retainer agreement, which remains in place.

Note 5 — Royalty Agreements

The Company is party to a Royalty Agreement with Curative Health Services, Inc. Under this agreement as amended, Curative is to receive 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 Knighton Patent. These costs are reflected in the Cost of royalties line on the Statements of Operations.

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 product sales, 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 6 — Receivables

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

	2008	2007
Trade receivables	$ 49,960	$ 157,610
Royalty receivables	361,250	338,450
Other receivables	6,014	231
	417,224	496,291
Less allowance for doubtful accounts	(26,485)	(140,229)
	$390,739	$ 356,062

Bad debt expense was approximately $3,000, for each of the years ended December 31, 2008 and 2007.

Patent settlements are one-time, non-recurring transactions negotiated by the Company for the discharge of past obligations pursuant to settlement and licensing agreements with various licensees. Patent settlements receivable are reflected at their net present value and consisted of the following remaining balances due at December 31:

	2008	2007
Noninterest bearing:		
Principal remaining, due quarterly through June 2009	$100,000	$ 600,000
Less unamortized discount based on imputed interest rate of 8.25%	(2,021)	(41,036)
Net	97,979	558,964
Interest bearing principal remaining, 8.0% interest rate	4,639	18,011
Total	102,618	576,975
Current portion	102,618	382,997
Long-term portion	$ —	$ 193,978

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 7 — Prepaid Expenses, Inventory, and Other Current Assets

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

	2008	2007
Prepaid insurance	$ 112,944	$ 121,964
Prepaid fees and rent	12,436	12,273
Deposits and advances	28,153	93,132
Inventory	37,187	10,779
	$ 190,720	$ 238,148

Note 8 — Property and Equipment

Property and equipment consisted of the following at December 31:

	2008	2007
Medical equipment	$ 330,591	$ 262,994
Office equipment	64,579	48,088
	395,170	311,082
Less accumulated depreciation	(307,781)	(290,840)
	$ 87,389	$ 20,242

Depreciation expense was approximately $20,000 and $7,000 for the years ended December 31, 2008 and 2007, respectively. Disposals of property and equipment during 2008 and 2007 were nominal.

Note 9 — Intangible Assets

Cytomedix owns eight U.S. patents, including U.S. Patent No. 5,165,938 (the “Knighton Patent”) and U.S. Patent No. 6,303,112 (the “Worden Patent”), various corresponding foreign patents, and various trademarks. The Knighton Patent and Worden Patent expire in November 2009 and February 2019, respectively.

Patents, related accumulated amortization, and cumulative impairment charges at December 31 were as follows:

	2008	2007
Patents	$ 2,400,000	$2,400,000
Less accumulated amortization	(878,418)	(727,517)
Less impairment charges	(1,521,582)	—
	$ —	$1,672,483

Given the substantial doubt regarding the Company’s ability to continue as a going concern and the fact that the Company continues to incur significant negative cash flows from operations, the Company determined that it may not realize the value of these patents and has concluded that their value has been fully impaired, resulting in a charge of approximately $1.5 million in the fourth quarter of 2008. This charge is reflected in the Impairment of goodwill and patents line of the Statements of Operations. The patent impairment charge resulted in an approximate $607,000 net increase to the deferred tax assets, but this increase was offset by a corresponding increase to the valuation allowance and therefore had no effect on the Company’s provision for income taxes. Amortization expense was approximately $151,000 for each of the years ended December 31, 2008 and 2007.

Goodwill represents the excess reorganization value over the amounts allocable to identifiable assets upon the Company’s emergence from bankruptcy in 2002. The Company completed its most recent annual evaluation

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 9 — Intangible Assets – (continued)

for impairment of goodwill as of December 31, 2008 and determined that goodwill was fully impaired, resulting in an impairment charge of approximately $2.0 million in the fourth quarter of 2008. This charge is reflected in the Impairment of goodwill and patents line of the Statements of Operations. This determination was primarily attributable to the Company’s loss of royalty revenue in the next twelve months, which raised substantial doubt regarding the Company’s ability to continue as a going concern, the fact that the Company continues to incur significant negative cash flows from operations, the significant decline in the Company’s market capitalization, and the overall deterioration in the global economy and financial markets. This assessment was supported by the findings in the annual independent valuation that the Company commissioned as of December 31, 2008. The goodwill impairment charge is not deductible for income tax purposes.

Note 10 — Accounts Payable and Accrued Expenses

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

	2008	2007
Trade payables	$ 263,544	$ 129,798
Accrued compensation and benefits	481,884	262,902
Accrued professional fees	209,800	193,000
Accrued royalty fees	334,300	360,300
Other payables	35,797	2,297
	$1,325,325	$ 948,297

Note 11 — Income Taxes

Income tax benefit (expense) for the years ended December 31, 2008 and 2007 consisted of the following:

	2008	2007
Current:		
Federal	$ —	$ —
State	—	—
Deferred:		
Federal	—	—
State	—	—
Net operating loss carryforward	—	—
Total income tax (expense) benefit	$ —	$ —

TABLE OF CONTENTS

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 11 — Income Taxes – (continued)

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

	2008	2007
Deferred tax assets:		
Stock-based compensation	$ 3,554,000	$ 3,662,000
Amortization of patents	126,000	—
Other	146,000	239,000
Total deferred tax assets	3,826,000	3,901,000
Deferred tax liabilities:		
Amortization of patents	—	(521,000)
Other	—	1,000
Net deferred tax assets	3,826,000	3,381,000
Net operating loss carryforwards	10,881,000	8,945,000
	14,707,000	12,326,000
Less valuation allowance	(14,707,000)	(12,326,000)
Total deferred tax assets	$ —	$ —

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

	2008	2007
U.S. Federal statutory income tax	35.0%	35.0%
State and local income tax benefits	5.1%	4.0%
Nondeductible goodwill impairment	(9.2%)	—
Other	0.2%	0.3%
Valuation allowance for deferred income tax assets	(31.1%)	(39.3%)
Effective income tax rate	0.0%	0.0%

The Company had loss carryforwards of approximately $28,539,000 as of December 31, 2008 that may be offset against future taxable income. The carryforwards will expire between 2021 and 2028. 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 $14,707,000 and $12,326,000 at December 31, 2008 and 2007, respectively.

The Company's source of income before expenses is exclusively 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 12 — 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 65,000,000 shares. It is subordinate to both Series A Convertible Preferred stock and Series B 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

TABLE OF CONTENTS

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

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 and B 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 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

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

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, 2008 and 2007, no Series C remained outstanding.

Warrants and Options

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

	# Outstanding	
Equity Instrument	**December 31, 2008**	**December 31, 2007**
D Warrants[1]	304,033	304,033
Unit Warrants[2]	1,812,500	1,812,500
Fitch/Coleman Warrants[3]	975,000	975,000
August 2008 Warrants[4]	1,000,007	—
Other warrants[5]	1,261,632	1,293,900
Options issued under the Long-Term Incentive Plan[6]	4,020,388	3,294,687

(1) These warrants were issued in exchange for the voluntary exercise of Outstanding Warrants during the offer period ending May 1, 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) These warrants were issued in connection with the Unit offering (discussed later in this Note). As amended, they expire on March 31, 2010, and are voluntarily exercisable at $1.65 per share, provided that the exercise does not result in the holder owning in excess of 9.999% of the outstanding shares of the Company's Common stock. They provide for a cashless exercise at the option of the warrant provided that (i) the per share market price of one share of Common stock is greater than the warrant price and (ii) a registration statement for the resale of warrant stock is not in effect. The Company may call up to 100% of the outstanding Unit warrants, provided that the Company's Common stock must have been trading at a closing price greater than $5.00 for a period of at least ten (10) consecutive trading days prior to the date of delivery of the Call Notice and 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.

(3) These warrants were issued in connection with 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 price on the warrants will be: 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.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

(4) These warrants were issued in connection with the August 2008 financing (discussed later in this Note), 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 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 $1.00 to $6.00. They are voluntarily exercisable once vested. There is no call provision associated with these warrants, except as follows. One service provider warrant for 450,000 shares, as amended, contains a call provision identical to the one in Unit warrants discussed above.

(6) These options were issued under the Company's shareholder approved Long-Term Incentive Plan. See Note 13 for a full discussion regarding these options.

Activity

The Company issued 2,035,835 shares of Common stock during 2008. The following table lists the sources of and the proceeds from those issuances:

Source	# of Shares	Total Proceeds
Conversion of series A convertible preferred shares	5,827	$ —
Issuance of shares pursuant to registered direct offering completed in Third Quarter 2008	2,000,008	$1,500,000
Common stock issued in lieu of cash for fees earned by advisors	30,000	$ 12,000
Totals	2,035,835	$1,512,000

The Company issued 2,939,118 shares of Common stock during 2007. The following table lists the sources of and the proceeds from those issuances:

Source	# of Shares	Total Proceeds
Conversion of series A convertible preferred shares	95,969	—
Conversion of series B convertible preferred shares	1,624	—
Exercise of series C-2 warrants	855,000	$1,282,500
Exercise of unit offering warrants	12,500	$ 18,750
Exercise of options issued under the Long-Term Incentive Plan	10,000	$ 11,000
Cashless exercise of 100,000 options issued under the Long-Term Incentive Plan	62,025	$ —
Exercise of other warrants	602,000	$ 662,000
Issuance of shares to patent counsel	1,300,000	—
Totals	2,939,118	$1,974,250

The Company has used the cash proceeds from these 2007 and 2008 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 and March 26, 2008. 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 2008, the Company granted 1,235,500 options to purchase the Company's Common stock with exercise prices ranging from $0.40 to $1.50 under the LTIP (see Note 13).

TABLE OF CONTENTS

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

In December 2008, under the LTIP, the Company issued 30,000 shares of restricted Common stock to individual principals at Spencer Clarke, LLC, for investment advisory services. These shares are contractually restricted from sale through December 16, 2009.

In October 2008, the Company executed amendments to certain terms and provisions of its outstanding Unit Offering Warrants to purchase the common stock of the Company, issued in the March 2004 private placement (the "Unit Warrants") and of the FEQ Investments, Inc. warrant issued in April 2004 (the "FEQ Warrant"). Specifically, the Unit Warrant amendments were as follows: (i) the term of such warrants was extended from March 31, 2009 to March 31, 2010, (ii) the exercise price of the warrants was increased by 10% from $1.50 to $1.65 per share, and (iii) the call provision was amended so that such instruments are callable by the Company in the event the closing price of the Company's securities is in excess $5.00 per share for at least 10 consecutive trading days. The FEQ Warrant was amended so that (i) its term was extended from April 1, 2009 to April 1, 2010, (ii) the exercise price of the warrant was increased by 10% from $1.00 to $1.10 per share and (iii) a call provision identical to the one added to the Unit Warrants was added to the FEQ Warrant. The amendment to the FEQ Warrant resulted in approximately $78,000 of non-cash equity based compensation expense in the fourth quarter of 2008. The foregoing amendments to the warrants were approved by the requisite vote of the warrant holders and are effective as of October 31, 2008.

On September 18, 2008, 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 will result in the issuance of 14,859 and 6,895 shares of Series A and B Convertible Preferred stock, respectively.

In August 2008, the Company entered into securities purchase agreements with certain investors for their purchase of up to 2,000,000 shares (subject to rounding for partial shares) of Cytomedix's common stock at a purchase price of $0.75 per share, and 4-year warrants to purchase an additional 1,000,000 (subject to rounding for partial shares) shares of Cytomedix's common stock at an exercise price of $1.00. Holders of the warrants may exercise warrants at any time through August 29, 2012. The securities in this financing were offered and sold pursuant to a prospectus dated March 26, 2008 and a prospectus supplement dated August 22, 2008, 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 $1,500,000 (before customary offering expenses of approximately $55,000, and excluding any proceeds that Cytomedix may receive upon exercise of the warrants). Certain officers and directors of the Company participated in this offering on the same terms and provisions as public investors.

During the year ended December 31, 2008, 509,799 options expired or were forfeited by contract due to the termination of the underlying service arrangement.

In 2007, the Company granted 279,925 options to purchase the Company's Common stock with exercise prices ranging from $0.88 to $1.50 under the LTIP (see Note 13).

On October 9, 2007, the Company issued a Call Notice to call all outstanding Series C-2 Warrants. The Series C-2 Warrant holders had until October 30, 2007 to exercise their Series C-2 Warrants. The total number of Series C-2 Warrants called was 855,000 at an exercise price of $1.50 per warrant. All eligible outstanding Series C-2 Warrants were exercised, at a total exercise price of $1,282,500.

On October 5, 2007, pursuant to its contract with its investor relations firm, the Company granted The Wall Street Group, Inc. 125,392 warrants to purchase the Company's Common stock. Of these 34,483 warrants vest immediately, have an exercise price of $2.90, and expire August 31, 2011. The remaining 90,909 warrants vested ratably through August 2008, have an exercise price of $1.10, and expire August 31, 2012.

On September 11, 2007, the Company issued warrants to purchase a total of 9,240 shares of common stock to the designees of System 1 Search, Inc., as partial payment of compensation due under the placement agency

TABLE OF CONTENTS

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

agreement between the Company and System 1, Search, Inc., dated December 12, 2004. The warrants vested immediately, have an exercise price of $1.15 per share, and expire on September 11, 2012.

On August 21, 2007, as required by the Certificate of Designation filed with the Delaware Secretary of State, the Company declared a stock dividend on its Series A and B Convertible Preferred shares. This dividend resulted in issuance of 30,168 and 6,846 shares of Series A and B Convertible Preferred stock, respectively.

Effective August 2, 2007, pursuant to a Term Sheet Agreement, a Shareholders' Agreement, and a Registration Rights Agreement with the Company's patent counsel (discussed in Note 5 above), the Company paid Fitch, Even, Tabin & Flannery ("Fitch") and The Coleman Law Firm ("Coleman") a total of $90,000, issued to Fitch and Coleman a total of 1.3 million shares of the Company's common stock, and issued warrants to purchase an additional 975,000 shares of the Company's common stock (the "Warrants"). The Warrants will have a 7.5 year term. The strike price on the Warrants will be: 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 25% of the warrants each quarter beginning in the quarter that the subsequent transfer of the stock underlying the warrants is registered and the stock is trading 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.

On August 1, 2007, the Company entered into an agreement with HMA Advisors, Inc. ("HMA"), to amend certain terms of HMA's Common Stock Purchase Warrant (the "HMA Warrant") dated July 29, 2002. As originally issued, the HMA Warrant provided HMA the right to purchase 600,000 shares of common stock at an exercise price of $1.00 per share, with an expiration date of August 7, 2007. In return for the payment of $35,000 and an increase of the exercise price from $1.00 to $1.10 per share, the Company amended the term of the HMA Warrant so that it would expire on the earlier of (i) December 31, 2007 or (ii) thirty (30) days after the date that the Company publicly announced and/or disseminated the final decision of the FDA's consideration of the Company's appeal of the October 13, 2006 Non-Substantial Equivalence ("NSE") determination letter. On October 16, 2007, HMA exercised the HMA Warrant.

Pursuant to written resolution effective July 10, 2007, the Board of Directors modified certain options previously granted to Dr. Kshitij Mohan, the Company's Chairman and CEO, to increase the exercise price from $1.50 to $2.24. The reason for the modification is to remove the unintended tax consequences pursuant to I.R.S. Code Section 409A. The increase in exercise price results in a reduction in value of approximately $18,000, which represents the loss in value of stock options based upon the increase in the exercise price. Pursuant to the written resolution, Dr. Mohan received a cash award of approximately $18,000 in 2008.

Pursuant to written resolution effective July 10, 2007, the Board of Directors modified certain options previously granted to Mr. Andrew Maslan, the Company's CFO, to increase the exercise price from $2.23 to $2.52. The reason for the modification is to remove the unintended tax consequences pursuant to I.R.S. Code Section 409A. The increase in exercise price results in a reduction in value of approximately $250, which represents the loss in value of stock options based upon the increase in the exercise price. Pursuant to the written resolution, Mr. Maslan received a cash award of approximately $250 in 2008.

In April 2007, the terms of the Subscription Note from FEQ Investments, Inc. were amended to accelerate a portion ($25,000) of the principal payments and extend the remainder. As amended, the final installment payment of $401,250 was due by December 31, 2007. All other terms of the note remain unchanged and in full force and effect. All principal and interest was paid as of December 31, 2007.

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 FINANCIAL STATEMENTS

Note 12 — Capital Stock – (continued)

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

	2008	2007
Series A Preferred Stock	$ 3,653	$ 10,739
Series B Preferred Stock	3,590	3,311
	$ 7,243	$ 14,050

Note 13 — Long-Term Incentive Plan

Cytomedix has a shareholder-approved, Long-Term Incentive Plan ("LTIP") that permits incentive awards of options, SARs, restricted stock awards, phantom stock awards, performance unit awards, dividend equivalent awards and other stock-based awards. Cytomedix may issue up to 5,000,000 shares of stock under this LTIP. At December 31, 2008, 483,412 shares were available for future grants. Of all options granted through December 31, 2008, 496,200 had been exercised and 4,020,388 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 December 16, 2018.

A summary of option activity under the LTIP as of December 31, 2008, and changes during the year then ended is presented below:

Options	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2008	3,294,687	$ 1.89		
Granted	1,235,500	$ 0.92		
Exercised	0	—		
Forfeited or expired	(509,799)	$ 1.61		
Outstanding at December 31, 2008	4,020,388	$ 1.63	7.1	$ 0
Exercisable at December 31, 2008	2,975,889	$ 1.90	6.2	$ 0

The following table summarizes information about stock options outstanding as of December 31, 2008:

	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

$0.40 – $1.50	2,432,054	7.2	$ 1.15	1,595,889	$ 1.42
$1.51 – $3.00	1,518,334	6.8	$ 2.22	1,310,001	$ 2.31
$3.01 – $4.50	—	—	—	—	—
$4.51 – $6.00	70,000	7.0	$ 5.20	70,000	$ 5.20

The weighted-average grant-date fair value of stock options granted under the LTIP during the years 2008 and 2007 was $0.72 and $0.93, respectively. The total intrinsic value of stock options exercised under the LTIP during the fiscal years ended December 31, 2008 and 2007, was $0 and $344,000, respectively.

As of December 31, 2008, there was approximately $486,000 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 2.1 years. The total fair value of stock options granted under the LTIP that vested during the fiscal years ended December 31, 2008 and 2007 was approximately $490,000 and $412,000, respectively.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 13 — Long-Term Incentive Plan – (continued)

Pursuant to written resolution effective July 10, 2007, the Board of Directors modified certain options previously granted to Dr. Kshitij Mohan, the Company's Chairman and CEO, to increase the exercise price from $1.50 to $2.24. The reason for the modification is to remove the unintended tax consequences pursuant to I.R.S. Code Section 409A. The increase in exercise price results in a reduction in value of approximately $18,000, which represents the loss in value of stock options based upon the increase in the exercise price. Pursuant to the written resolution, Dr. Mohan received a cash award of approximately $18,000 in 2008. This modification did not result in any additional stock-based compensation.

Pursuant to written resolution effective July 10, 2007, the Board of Directors modified certain options previously granted to Mr. Andrew Maslan, the Company's CFO, to increase the exercise price from $2.23 to $2.52. The reason for the modification is to remove the unintended tax consequences pursuant to I.R.S. Code Section 409A. The increase in exercise price results in a reduction in value of approximately $250, which represents the loss in value of stock options based upon the increase in the exercise price. Pursuant to the written resolution, Mr. Maslan received a cash award of approximately $250 in 2008. This modification did not result in any additional stock-based compensation.

Note 14 — Supplemental Cash Flow Disclosures — Non-Cash Transactions

Non-cash transactions for years ended December 31 include:

	2008	2007
Accrued dividends on 8% preferred stock	$ 14,947	$ 32,828
Stock issued to outside patent counsel for satisfaction of existing payables	—	162,520
Preferred dividends paid by issuance of stock	21,754	37,014

Cash paid for interest and taxes was $0 in 2008 and 2007, respectively.

Note 15 — Termination and Consulting Agreement

On June 5, 2008, the Company and Kshitij Mohan, the Company's former Chief Executive Officer and Chairman of the Board of Directors, entered into a Termination and Consulting Agreement, pursuant to which Dr. Mohan agreed, among other things, to step down as the CEO and Chairman and to become a consultant to the Company effective June 30, 2008.

As part of this agreement, Dr. Mohan is entitled to the following compensation:

- $500,000 to be paid in 24 equal monthly installments, beginning in July 2008
- $5,000 toward legal fees incurred by Dr. Mohan related to this agreement
- Continuation of health benefits under the Company's health insurance plans

The Company recorded $510,000 in compensation expense in the second quarter of 2008 which represents the present value of the above outlined special termination benefits to Dr. Mohan. Additionally, the Company reversed $192,000 in accrued bonus expense for Dr. Mohan. The net expense is reflected in the Salaries and wages line on the Statements of Operations and $257,000 and $123,000, representing the short and long term components of the remaining obligation to Dr. Mohan, are reflected in the Accounts payable and accrued expenses and Other liabilities lines of the Balance Sheets, respectively.

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 16 — Operating Leases

The Company leases its office space under an operating lease expiring in December 2009, with future minimum lease payments as indicated in the table below:

Years ending December 31:

2009	$ 68,587
Thereafter	—
Total future minimum lease payments	$ 68,587

For the years ended December 31, 2008 and 2007, the Company incurred rent expense of approximately $67,000 and $65,000, respectively.

Note 17 — Commitments and Contingencies

The Company is prohibited from granting a security interest in 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 prior to July 2009 and would result in the issuance of approximately 325,000 shares of Common stock.

The Company is party to a registration rights agreement and a related warrant agreement with one of its former consultants. The registration rights agreement provides for liquidated damages, at the discretion of the warrant holder, in the event that the registration statement relating to the shares underlying the warrants becomes ineffective. The Company's obligations under this agreement run through the earlier of April 1, 2012 or two years after the exercise of the related warrants. At the discretion of the warrant holder, the liquidated damages may take the form of cash or additional shares of the Company's Common stock. As of December 31, 2008, the Company has estimated the maximum undiscounted liquidated damages at $98,000. However, the Company has determined that it is unlikely that circumstances allowing for the aforementioned liquidated damages would arise, and therefore no contingent liability has been recorded.

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 approximately $500,000 over a period of three years, beginning in the third quarter of 2008. As of December 31, 2008, $41,000 had been incurred.

In June 2008, the Company renewed its operating lease for its office space in Rockville, MD which was set to expire in July 2008. Under the terms of the renewed lease, the new expiration date is December 31, 2009 and monthly rent expense is approximately $5,600 through July 2009 and approximately $5,800 thereafter.

Note 18 — Subsequent Events

In January 2009, the Company granted 190,000 stock options under the LTIP to board members for their upcoming service in 2009. These options have exercise prices of $0.30 and $0.35 (40,000 and 150,000 options, respectively), which were the closing market prices on their respective dates of grant, vest in equal monthly installments through December 2009, and expire ten years from the date of grant.

TABLE OF CONTENTS

CYTOMEDIX, INC.

NOTES TO FINANCIAL STATEMENTS

Note 19 — Quarterly Financial Data (Unaudited) Required by Regulation S-X Item 3-02(b)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2008				
Revenues	$ 627,393	$ 427,915	$ 499,371	$ 536,058
Gross profit	$ 409,233	$ 321,314	$ 390,448	$ 368,722
Net loss	$ (899,272)	$ (1,249,858)	$ (802,969)	$ (4,708,650)
Loss per common share – Basic and diluted	$ (0.03)	$ (0.04)	$ (0.03)	$ (0.14)
2007				
Revenues	$ 453,939	$ 507,412	$ 461,957	$ 519,970
Gross profit	$ 217,069	$ 244,782	$ 315,856	$ 315,286
Net loss	$ (820,323)	$ (601,824)	$ (2,539,833)	$ (1,075,889)
Loss per common share – Basic and diluted	$ (0.03)	$ (0.02)	$ (0.09)	$ (0.03)

The Fourth Quarter of 2008 includes an impairment charge with respect to goodwill and patents of approximately $3,543,000.

TABLE OF CONTENTS

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

None.

Item 9A(T). 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, 2008.

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, 2008.

This Annual Report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the company to provide only management's report in this Annual Report.

Changes in Internal Control over Financial Reporting

There was no change in the Company's internal control over financial reporting during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

TABLE OF CONTENTS

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, 2008. 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	69	November 1, 2004	Presiding Director and Acting Chairman of the Board
David P. Crews	46	September 28, 2001	Director
David E. Jorden	46	September 19, 2008	Director
Stephen N. Keith	56	September 19, 2008	Director
Mark T. McLoughlin	53	June 7, 2004	Director
C. Eric Winzer	51	January 30, 2009	Director
Martin P. Rosendale	51	July 1, 2008	Director, Chief Executive Officer
Andrew S. Maslan	39	August 15, 2005	Chief Financial Officer
Carelyn P. Fylling	61	December 1, 2001	Vice President of Professional Services

Effective January 30, 2009, the Board appointed C. Eric Winzer, 51, to serve as Director and Chairman of the Audit Committee.

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.

David P. Crews has served as a Director since September 28, 2001. Mr. Crews has been a registered broker/dealer

specializing in fixed income securities for the last 25 years. For the last 12 years, he was one of three board members for Crews and Associates, Inc., an investment banking firm in Little Rock, AR. Mr. Crews resigned from Crews and Associates in August of 2008 to open his own leasing company, Financial One, a company that specializes in government and municipal financing. He has also recently joined Williams Financial Group as a Senior Financial Consultant, specializing in fixed income securities. He was also a founding member of All American Leasing Company, a municipal finance firm. He is a partner in Chasc, Inc., an investment advisory firm, and is Vice President, Secretary and Treasurer. Mr. Crews serves as a Board member for Pure Entergy Group, Inc., an oil and gas company.

David E. Jorden, CPA, CFA has served as a Director since September 19, 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.

Stephen N. Keith, MD, MSPH has served as a Director since September 19, 2008. Dr. Keith currently holds the office of 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.

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.

C. Eric Winzer has served as Director since January 30, 2009. Mr. Winzer currently serves as Executive Vice President and Chief Financial Officer of Avalon Pharmaceuticals, Inc. (Nasdaq: AVRX). Prior to joining Avalon, 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 various 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.

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).

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, Maryland. Earlier, he held positions with two other Rockville, Maryland-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.

Carelyn P. Fylling, RN, MSN has served as the Company's Vice President of Professional Services since December 2001. Immediately prior to joining Cytomedix, she provided independent consulting and outsourcing services to the health care industry through Fylling Associates, LLC, which she wholly owns, and through Strategic Partners, LLC, in

which she holds a partnership interest. Prior to that, Ms. Fylling spent 13 years at Curative Health Services, serving as Director of Medical Communications and Education, Worldwide. Prior to that, Ms. Fylling was Director of Training and Program Development at the International Diabetes Center in Minneapolis, Minnesota. She also has served on the national Board of Directors of the American Diabetes Association and numerous national committees of the American Diabetes Association. Ms. Fylling received the prestigious Ames Award for Outstanding Educator in the Field of Diabetes.

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 five years: (i) been convicted of any criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) 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. Crews and Dr. Keith. 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 all such forms (with the exception of Dr. Stephen Keith's Form 3, which was inadvertently filed late) 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, 2008.

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 2007 and 2008, the named executive officers consisted of the following persons:

- Martin P. Rosendale — Chief Executive Officer (Principal Executive Officer) (effective July 1, 2008)
- Kshitij Mohan — Chairman of the Board, Chief Executive Officer (Principal Executive Officer) (through June 30, 2008)
- Andrew S. Maslan — Chief Financial Officer
- Carelyn P. Fylling — Vice President of Professional Services

Summary Compensation Table

Name and Principal Position	Year	Salary	Bonus	Option Awards[5]	All Other Compensation	Total
Martin P. Rosendale[1]	2008	$173,295	$ 25,000	$145,001	$ 917	$ 344,213
Chief Executive Officer (Effective July 1, 2008)	2007	$ —	$ —	$ —	$ —	$ —
Kshitij Mohan[2]	2008	$216,823	$ 8,100	$ 39,198	$ 518,367	782,488
Chief Executive Officer (Effective April 1, 2004)	2007	$355,816	$168,056	$ 22,865	$ 34,000	$ 580,737
Andrew S. Maslan[3]	2008	$172,062	$ 40,625	$ 89,979	$ 8,518	$ 311,184
Chief Financial Officer (Effective August 16, 2005)	2007	$158,875	$ 40,252	$110,407	$ 7,936	$ 317,470
Carelyn P. Fylling[4]	2008	$145,119	$ 35,850	$ 26,215	$ 7,239	$ 214,423
VP Professional Services	2007	$138,103	$ 30,000	$ 17,561	$ 6,720	$ 192,384

TABLE OF CONTENTS

(1) Mr. Rosendale joined the Company on March 24, 2008 as Executive VP — Business Development. He was appointed Chief Executive Officer, effective July 1, 2008. Amount of salary for 2008 represents salary earned from his date of hire. His annualized base salary is currently $300,000. 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 Black-Scholes value of expense recognized the period relating to Mr. Rosendale's options. Amounts in all other compensation reflect employer 401(k) matching contributions.

(2) Dr. Mohan's employment was terminated effective June 30, 2008. Amount of salary for 2008 represents salary earned through his date of separation. Amounts under Option Awards represent the Black-Scholes value of expense recognized the period relating to Dr. Mohan's options. All Other Compensation in 2008 consists of $8,367 in employer 401(k) matching contributions and $510,000 in severance compensation to which Dr. Mohan is entitled. All Other Compensation in 2007 consisted of $9,000 in employer 401(k) matching contributions and $25,000 in a perk-package cash allowance.

(3) 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 Black-Scholes value of expense recognized the period relating to Mr. Maslan's options. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

(4) 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 Black-Scholes value of expense recognized the period relating to Ms. Fylling's options. Amounts in All Other Compensation reflect employer 401(k) matching contributions.

(5) See Note 3 to the Financial Statements for discussion of option valuation model and related assumptions.

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.

Kshitij Mohan: Pursuant to a Termination and Consulting Agreement, Dr. Mohan's employment was terminated, effective June 30, 2008. Under this agreement, Dr. Mohan is entitled to the following compensation: $500,000 to be paid in 24 equal monthly installments, beginning in July 2008, $5,000 toward legal fees incurred by Dr. Mohan related to this agreement, continuation of health benefits under the Company's health insurance plans through December 2009. Dr. Mohan is not entitled to any other compensation outside of this agreement.

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.

Carelyn P. Fylling: Ms. Fylling's employment agreement, as amended, provides for her at-will employment as the Company's VP of Professional Services. Effective October 1, 2008, Ms. Fylling's annual salary was $150,500 and her 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. Ms. Fylling may be entitled to certain compensation upon termination or change-in-control, not to exceed a lump sum payment equal to 11/12 of her annual base salary and a pro-rata bonus through her date of termination.

TABLE OF CONTENTS

Outstanding Equity Awards at December 31, 2008

Name	Option Awards			
	Number of Securities Underlying Unexercised Options Exercisable[1]	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price	Option Expiration Date
Martin P. Rosendale	20,000	180,000[2]	$ 1.54	3/14/2018
	—	300,000[3]	$ 0.75	9/19/2018
	—	200,000[4]	$ 0.40	12/16/2018
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
	50,000	—	$ 2.52	3/16/2016
	33,333	16,667[5]	$ 2.73	10/11/2016
	6,667	13,333[6]	$ 0.88	7/27/2017
	—	100,000[7]	$ 0.70	9/18/2018
Carelyn P. Fylling	250,000	—	$ 1.50	8/7/2012
	19,077	—	$ 1.25	10/21/2013
	13,334	6,666[8]	$ 2.40	1/11/2016
	6,667	13,333[6]	$ 0.88	7/27/2017
	—	30,000[9]	$ 0.70	9/18/2018

(1) All options are fully vested.

(2) Options vest as follows: 60,000 each on 3/24/2009, 3/24/2010, and 3/24/2011.

(3) Options vest as follows: 100,000 each on 1/1/2009, 1/1/2010, and 1/1/2011.

(4) Options vest as follows: 66,667 each on 1/1/2009 and 1/1/2010, and 66,666 vest on 1/1/2011.

(5) Options vest on 10/11/2009.

(6) Options vest as follows: 6,667 on 7/27/2009, and 6,666 on 7/27/2010.

(7) Options vest as follows: 33,334 on 1/1/2009 and 33,333 each on 1/1/2010 and 1/1/2011.

(8) Options vest on 1/12/09.

(9) Options vest as follows: 10,000 each on 1/1/2009, 1/1/2010, and 1/1/2011.

Director Compensation

For service during 2008, each non-employee director was entitled to and received options to purchase 30,000 shares of the Company's Common stock; each committee chair was entitled to and received options to purchase 10,000 shares of the Company's Common stock; each non-employee director was entitled to and received $500 for his participation in each telephonic meeting of the Board or a Committee and $1,000 for his participation in each in-person meeting of the Board or a Committee.

Director Compensation in 2008

Name	Fees Earned or Paid in Cash	Option Awards[1]	All Other Compensation	Total
James S. Benson	$ 8,000	$ 49,169	$ —	$57,169
David P. Crews	$ 7,000	$ 36,876	$ —	$43,876
Arun K. Deva	$ 10,000	$ 45,072	$ —	$55,072
David F. Drohan	$ 3,500	$ 27,657	$ —	$31,157
Stephen N. Keith	$ —	$ —	$ —	$ —
Mark T. McLoughlin	$ 7,000	$ 49,169	$ —	$56,169
David E. Jorden[2]	$ —	$ —	$ 36,398	$36,398

(1) At December 31, 2008, the following number of stock options remained unexercised by non-employee directors as follows: Benson — 190,000, Crews — 350,000, Deva — 176,667, Drohan — 142,500, McLoughlin — 190,000. Assumptions used to determine the value of option awards may be found in Note 3 to the 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 All Other Compensation column represent his compensation as an employee and consists of $30,000 in cash and $6,398 representing the amount of expense recorded by the Company in 2008 associated with Mr. Jorden's compensatory stock options.

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 5,000,000 shares of Common stock.

Equity Compensation Plan Information as of December 31, 2008

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	4,020,388	$ 1.63	483,412
Equity compensation plans not approved by security holders[1]	2,236,632	$ 1.53	n/a
Total	6,257,020	$ 1.59	483,412

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

As of December 31, 2008, 496,200 shares of common stock have been issued upon exercise of options granted pursuant to the Long Term Incentive Plan.

Security Ownership of Certain Beneficial Owners

The following table sets forth information regarding the ownership of the Company's Common stock as of March 13, 2009 by all those known by the Company to be beneficial owners of more than five percent of its Common stock. This table is prepared in reliance upon beneficial ownership statements filed by such shareholders with the SEC under Section 13(d) or 13(g) of the Exchange Act and/or the best information available to the Company. As of March 13, 2009, there are 33,973,201 shares of Common stock issued and outstanding.

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership	Percent of Class
David E. Jorden 416 Hungerford Drive, Suite 330 Rockville, MD 20850	3,512,101[1]	10.3%
FEQ Gas, LLC	1,156,200[2]	3.3%
FEQ Investments, Inc.	1,037,900[2]	3.0%
Group consisting of Jorden, FEQ Gas, FEQ Investments	5,706,201	16.1%

(1) Includes 16, 667 shares issuable upon exercise of options and 243,667 shares issuable upon exercise of warrants. Pursuant to the terms of the warrants, the reporting person cannot exercise such warrants if the

exercise would result in the reporting person being the "beneficial owner" of more than 9.999% of the outstanding stock within the meaning of Rule 13d-1 under the Exchange Act.

(2) FEQ Gas and FEQ Investments are both controlled by Mr. Ernest Bartlett. Includes 1,308,100 shares issuable upon exercise of warrants. Pursuant to the terms of the warrants relating to 858,100 shares, the reporting person cannot exercise such warrants if the exercise would result in the reporting person being the "beneficial owner" of more than 9.999% of the outstanding stock within the meaning of Rule 13d-1 under the Exchange Act.

Security Ownership of Management

The following table sets forth information regarding the ownership of the Company's Common stock as of March 13, 2009 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 13, 2009, there are 33,973,201 shares of

Common stock issued and outstanding.

Name of Beneficial Owner[11]	Beneficial Ownership[1]	Percent of Class[1]
James S. Benson	206,667[2]	*
David P. Crews	1,074,124[3]	3.1%
Carelyn P. Fylling	310,042[4]	*
David E. Jorden	3,512,101[5]	10.3%
Stephen N. Keith	16,667[6]	*
Andrew S. Maslan	228,535[7]	*
Mark T. McLoughlin	226,668[8]	*
Martin P. Rosendale	311,668[9]	*
C. Eric Winzer	16,667[10]	*
Group consisting of Benson, Crews, Fylling, Keith, Jorden, Maslan, McLoughlin, Rosendale, and Winzer	5,574,804	15.6%

* 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 13, 2009, which was 33,973,201. 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 206,667 shares Mr. Benson may acquire upon the exercise of stock options.

(3) Includes 379,167 shares Mr. Crews may acquire upon the exercise of stock options or warrants.

(4) Includes 305,744 shares Ms. Fylling may acquire upon the exercise of stock options.

(5) Includes 260,334 shares Mr. Jorden may acquire upon the exercise of stock options or warrants.

(6) Includes 16,667 shares Dr. Keith may acquire upon the exercise of stock options.

(7) Includes 183,335 shares Mr. Maslan may acquire upon the exercise of stock options or warrants.

(8) Includes 213,334 shares Mr. McLoughlin may acquire upon the exercise of stock options or warrants.

(9) Includes 263,334 shares Mr. Rosendale may acquire upon the exercise of stock options or warrants.

(10)Includes 16,667 shares Mr. Winzer may acquire upon the exercise of stock options.

(11)All addresses are c/o Cytomedix, Inc., 416 Hungerford Drive, Suite 330, Rockville, MD 20850.

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.

TABLE OF CONTENTS

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

On June 10, 2008, the Company filed a Current Report on Form 8-K, disclosing, among other things, the terms and provisions of the Termination and Consulting Agreement by and between the Company and Kshitij Mohan, the Company's former CEO and Chairman. The 8-K discussion is incorporated by reference herein.

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 P. Crews, David E. Jorden, Stephen N. Keith, Mark T. McLoughlin, Martin P. Rosendale, and C. Eric Winzer. 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 — Investor Relations, 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.

Item 14. Principal Accounting Fees and Services

The following table presents fees for professional services rendered by PricewaterhouseCoopers, LLP for the fiscal years 2008 and 2007:

Services Performed	2008	2007
Audit fees[1]	$ 310,683	$ 433,000
Audit-related fees[2]	—	—
Tax fees[3]	27,600	34,000
All other fees[4]	—	—
Total Fees	$ 338,283	$ 467,000

(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. In 2007, audit fees also include $123,000 associated with the Company's financial restatements, filed with the SEC on November 14, 2007.

(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 2008 and 2007, all such services were pre-approved by the Audit Committee.

TABLE OF CONTENTS

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.

TABLE OF CONTENTS

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. Financial Statements

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

2. Schedule II — Valuation and Qualifying Accounts

See Footnotes to Financial Statements in Item 8 of this report, other than those listed in the table below.

	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions[1]	Balance at End of Period
Year Ended December 31, 2008				
Allowance for doubtful accounts	$ 140,000	$ 3,000	$ (117,000)	$ 26,000

Valuation allowance for deferred tax assets	$12,326,000	$2,381,000	$ —	$14,707,000
Year Ended December 31, 2007				
Allowance for doubtful accounts	$ 137,000	$ 3,000	$ —	$ 140,000
Valuation allowance for deferred tax assets	$10,344,000	$1,982,000	$ —	$12,326,000

(1) Reflects receivables written off as uncollectible.

(b) Exhibits

For a list of exhibits filed with this Form 10-K, refer to the Exhibit Index beginning on page 70.

TABLE OF CONTENTS

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

Date: March 31, 2009

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 31, 2009

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

Date: March 31, 2009

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

Date: March 31, 2009

/s/ David P. Crews
David P. Crews
Director

Date: March 31, 2009

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

Date: March 31, 2009

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

Date: March 31, 2009

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

Date: March 31, 2009

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

Date: March 31, 2009

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.

TABLE OF CONTENTS

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).
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).
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).
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).
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).
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).
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).
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).
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.)
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).
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).
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).
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).
4.9	Form of Registration Rights Agreement between Cytomedix, Inc., and Class D Warrantholders (Previously filed on May 2, 2005, as exhibit to Current Report on Form 8-K, File No. 001-32518).
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).
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).
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).
10.4	Cytomedix, Inc. Long-Term Incentive Plan. (Previously filed on February 26, 2007, on Form 10-K for year ended December 31, 2006, File No. 001-32518).*

TABLE OF CONTENTS

Number	Exhibit Table
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).
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).
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).

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).
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).
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).
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).
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).
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).*
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).*
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).*
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).*
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).
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).
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).*
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).
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).*

TABLE OF CONTENTS

Number	Exhibit Table
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).*
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).*
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).
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 v143662_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. 333-147793) and the Registration Statement on Form S-8 (No. 333-120141) of Cytomedix, Inc. of our report dated March 19, 2009 relating to the financial statements and financial statement schedule, which appears in this Form 10-K.

McLean, Virginia
March 19, 2008

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 31, 2009

/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.

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 31, 2009

/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.

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, 2008 (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.

/s/ Martin P. Rosendale
Martin P. Rosendale
Chief Executive Officer
Date: March 31, 2009

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.

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, 2008 (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.

/s/Andrew S. Maslan
Andrew S. Maslan
Chief Financial Officer
Date: March 31, 2009

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.