Cytosorbents Corp
Form S-1/A
December 16, 2014

As filed with the Securities and Exchange Commission on December 16, 2014

Registration No. 333-199762

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

AMENDMENT NO. 4 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CYTOSORBENTS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	3841	98-0373793
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

7 Deer Park Drive, Suite K
Monmouth Junction, New Jersey 08852
(732) 329-8885

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

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

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration Statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

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

Large accelerated filer o
Accelerated filer o
Non-accelerated filer o
Smaller reporting company x

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of

1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

Subject to completion, dated December 16, 2014

CYTOSORBENTS CORPORATION

2,000,000 SHARES OF COMMON STOCK

We are offering 2,000,000 shares of our common stock. The offering price per share is $.

Our common stock is presently quoted on the OTCQB Marketplace, operated by the OTC Markets Group, Inc., or OTCQB, under the symbol CTSOD (until on or about January 4, 2015) and CTSO (beginning on or about January 5, 2015). On December 12, 2014, the last reported sale price of our common stock on the OTCQB was $5.29 per share. We have applied to list our common stock on the NASDAQ Capital Market (NASDAQ) under the symbol CTSO.

Investing in our common stock involves risks, including those set forth in the Risk Factors section of this prospectus beginning on page 9 as well as those set forth in any prospectus supplement.

The offering price to the public will be determined by negotiation between us and Brean Capital, LLC and H.C. Wainwright & Co., LLC (the Representatives) as representatives of the several underwriters (the Underwriters), but will be fixed prior to the commencement of the offering by the Underwriters. Please see the Underwriting section for more information.

We have agreed to issue warrants exercisable within five years after the effective date of the Registration Statement, representing 3% of the securities issued in the offering (the Underwriter Warrants) to the Representatives for nominal consideration. Resales of the Underwriter Warrants on a delayed or continuous basis pursuant to Rule 415 under the Securities Act are registered hereby. Resales of units, shares and warrants issuable upon exercise of the Underwriter Warrants or the component securities thereof are also being simultaneously registered on a delayed or continuous basis hereby.

	Per Share	Total
Public Offering Price	$	$
Underwriting Discounts and Commissions[1]	$	$
Proceeds to Us (Before Expenses)	$	$

(1) The underwriters will receive consideration in addition to the underwriting discounts and commissions. See Underwriting beginning on page 70.

The delivery of the shares is expected to be made on or about , 2014. We have granted the underwriters an

option for a period of 30 days to purchase up to a total of 300,000 additional shares.

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

The date of this prospectus is , 2014.

Joint Book Running Managers

BREAN CAPITAL **H.C. WAINWRIGHT & CO.**

Co-Managers

MERRIMAN CAPITAL **MLV & CO.** **WBB SECURITIES**

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PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in the common stock. You should carefully read the entire prospectus, including Risk Factors , Management s Discussion and Analysis of Financial Condition and Results of Operations and the Financial Statements, before making an investment decision. In this Prospectus, the terms CytoSorbents, Company, we, us and our refer to CytoSorbents Corporation.

Overview

Summary of Our Business

We are a critical care focused immunotherapy company using blood purification to modulate inflammation with the goal of preventing or treating multiple organ failure in life-threatening illnesses. The technology is based upon biocompatible, highly porous polymer sorbent beads that are capable of extracting unwanted substances from blood and other bodily fluids. The technology is protected by 32 issued U.S. patents with multiple applications pending both in the United States and internationally. Our intellectual property consists of composition of matter, materials, methods of production, systems incorporating the technology and multiple medical uses with expiration dates ranging from 3 to 12 years.

In March 2011, we received European Union, or E.U., regulatory approval under the CE Mark and Medical Devices Directive for CytoSorb®, as an extracorporeal cytokine filter indicated for use in clinical situations where cytokines are elevated. The goal of the CytoSorb® is to prevent or treat organ failure by reducing cytokine storm and the potentially deadly systemic inflammatory response syndrome in diseases such as sepsis, trauma, burn injury, acute respiratory distress syndrome, pancreatitis, liver failure, and many others. Organ failure is the leading cause of death in the intensive care unit, and remains a major unmet medical need, with little more than supportive care therapy (e.g., mechanical ventilation, dialysis, vasopressors, fluid support, etc.) as treatment options. By potentially preventing or treating organ failure, CytoSorb® may improve clinical outcome, including survival, while reducing the need for costly intensive care unit treatment, thereby potentially saving significant healthcare costs.

Our CE Mark enables CytoSorb® to be sold throughout the entire European Union. Many countries outside the E.U. accept CE Mark approval for medical devices, but may also require registration with or without additional clinical studies. The broad approved indication enables CytoSorb® to be used on-label in diseases where cytokines are elevated including, but not limited to, critical illnesses such as those mentioned above, autoimmune disease flares, and many other conditions where cytokine-induced inflammation plays a detrimental role.

As part of the CE Mark approval process, we completed our randomized, controlled, European Sepsis Trial amongst fourteen trial sites in Germany in 2011, with enrollment of one hundred (100) patients with sepsis and respiratory failure. The trial established that CytoSorb® was safe in this critically-ill population, and that it was able to broadly reduce key cytokines.

We plan to do larger, prospective studies in septic patients in the future to confirm the European Sepsis Trial findings.

In addition to CE Mark approval, CytoSorbents also achieved ISO 13485:2003 Full Quality Systems certification, an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in

the E.U. CytoSorbents manufactures CytoSorb® at its manufacturing facilities in New Jersey for sale in the E.U. and for additional clinical studies. We also established a reimbursement path for CytoSorb® in Germany and Austria.

From September 2011 through June 2012, we began a controlled market release of CytoSorb® in select geographic territories in Germany with the primary goal of preparing for commercialization of CytoSorb® in Germany in terms of manufacturing, reimbursement, logistics, infrastructure, marketing, contacts, and other key issues.

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In late June 2012, following the establishment of our European subsidiary, CytoSorbents Europe GmbH, CytoSorbents began the commercial launch of CytoSorb® in Germany with the hiring of Dr. Christian Steiner as Vice President of Sales and Marketing and three additional sales representatives who joined us and completed their sales training in Q3 2012. The fourth quarter of 2012 represented the first full quarter of direct sales with the full sales team in place. During this period, we expanded our direct sales efforts to include both Austria and Switzerland. At the end of second quarter of 2014, we had more than 150 key opinion leaders (KOLs) in critical care, cardiac surgery, and blood purification who were either using CytoSorb® or planning to use CytoSorb® in the near future.

In addition, we now have more than 40 investigator initiated studies being planned in Germany, Austria, and the United Kingdom in multiple applications including sepsis, cardiac surgery, lung injury, trauma, pancreatitis, liver failure, kidney failure, and others, with many already enrolling patients. These studies are being supported by our European Medical Director and our European Director of Scientific Affairs. As of September 30, 2014, the Company s sales force includes seven direct sales people and two sales support staff. We intend to add more staff to the direct sales and marketing team during 2014.

We have complemented our direct sales efforts with sales to distributors and/or corporate partners. In 2013, we reached agreement with distributors in the United Kingdom, Ireland, Turkey, Russia, and the Netherlands. In September 2013, we entered into a strategic partnership with Biocon, Ltd., Asia s largest biotechnology company with an initial distribution agreement for India and select emerging markets, under which Biocon will have the exclusive commercialization rights for CytoSorb®. In April 2014, we announced distribution of CytoSorb® in the Middle East, including Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, Bahrain, and Oman (the Gulf Cooperation Council or GCC) and Yemen, Iraq, and Jordan through an exclusive agreement with Techno Orbits. In August 2014, the Company announced exclusive distribution of CytoSorb® in Taiwan with HemoScien Corporation. We are currently evaluating other potential distributor networks in other major countries where we are either approved to market the device or where CE Mark approval is accepted.

We are currently conducting a dose ranging trial in Germany amongst eight clinical trial sites to evaluate the safety and efficacy of CytoSorb® when used for longer periods of time. Data from this dosing study is intended to help clinicians with additional treatment options for CytoSorb®, help support the positive clinical data from our first European Sepsis Trial, and help shape the trial protocol for a U.S. based pivotal study. In addition, we will receive additional data from the results of more than thirty investigator-initiated studies in Europe which are either currently underway or planned.

Concurrent with our commercialization plans, we intend to conduct or support additional clinical studies in sepsis, cardiac surgery, and other critical care diseases to generate additional clinical data to expend the scope of clinical experience for marketing purposes, to increase the number of treated patients, and to support potential future publications. The Company is currently organizing a pivotal trial in the U.S. using CytoSorb® during cardiac surgery that is intended to be the basis of the Company s application seeking U.S. regulatory approval.

The market focus for CytoSorb® is the prevention or treatment of organ failure in life-threatening conditions, including commonly seen illnesses in the intensive care unit such as infection and sepsis, trauma, burn injury, acute respiratory distress syndrome, or ARDS , and others. Sepsis is a major unmet medical need with no approved products in the U.S. or Europe to treat it. As with other critical care illnesses, multiple organ failure is the primary cause of death in sepsis. When used with standard of care therapy, that includes antibiotics, the goal of CytoSorb® in sepsis is to reduce excessive levels of cytokines and other inflammatory toxins, to help reduce the SIRS response and either prevent or treat organ failure.

In addition to the sepsis indication, we intend to continue to foster research in other critical care illnesses where CytoSorb® could be used, such as ARDS, trauma, severe burn injury and acute pancreatitis, or in other acute conditions that may benefit by the reduction of cytokines in the bloodstream. Some examples include the prevention of post-operative complications of cardiac surgery (cardiopulmonary bypass surgery) and damage to organs donated for transplant prior to organ harvest.

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Our proprietary hemocompatible porous polymer bead technology forms the basis of a broad technology portfolio. Some of our products include:

CytoSorb® an extracorporeal hemoperfusion cartridge approved in the E.U. for cytokine removal, with the goal of reducing SIRS and preventing or treating organ failure;
HemoDefend™ a development-stage blood purification technology designed to remove contaminants in blood transfusion products. Goal is to reduce transfusion reactions and improve the safety of older blood;
ContrastSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove IV contrast from the blood of high risk patients undergoing CT imaging with contrast, or interventional radiology procedures such as cardiac catheterization. The goal is to prevent contrast-induced nephropathy;
DrugSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove toxic chemicals from the blood (e.g., drug overdose, high dose regional chemotherapy, etc); and
BetaSorb™ a development-stage extracorporeal hemoperfusion cartridge designed to remove mid-molecular weight toxins, such as b2-microglobulin, that standard high-flux dialysis cannot remove effectively. The goal is to improve the efficacy of dialysis or hemofiltration.

We have been successful in obtaining technology development contracts from agencies in the U.S. Department of Defense, including DARPA, the U.S. Army, and the U.S. Air Force.

In September 2013, the National Heart, Lung, and Blood Institute, or NHLBI, a division of the National Institutes of Health, or NIH , awarded us a Phase I SBIR (Small Business Innovation Research) contract to further advance its HemoDefend™ blood purification technology for packed red blood cell (pRBC) transfusions. The project, entitled Elimination of blood contaminants from pRBCs using HemoDefend™ hemocompatible porous polymer beads, is valued at $203,351 over six months. The overall goal of this new program is to reduce the risk of potential side effects of blood transfusions, and help to extend the useful life of pRBCs.

In June 2013, we announced that the U.S. Air Force will fund a 30 patient, single site, randomized controlled human pilot study in the United States amongst trauma patients with rhabdomyolysis most commonly associated with trauma. The FDA has approved our Investigational Device Exemption (IDE) application for this study and we also have received ethics committee approval to proceed, and the study began in April 2014.

In June 2013, we began work on our previously announced $1 million Phase II SBIR U.S. Army contract to further develop its technology for the treatment of burn injury and trauma in animal models. This work is supported by the U.S. Army Medical Research and Material Command under an amendment to Contract W81XWH-12-C-0038 and has now received committed funding of $1.15 million to date.

In August 2012, we were awarded a $3.8 million, five-year contract by the Defense Advanced Research Projects Agency, or DARPA , for our Dialysis-Like Therapeutics program to treat sepsis. DARPA has been instrumental in funding many of the major technological and medical advances since its inception in 1958, including development of the internet, the global positioning system, or GPS , and robotic surgery. The DLT program in sepsis seeks to develop a therapeutic blood purification device that is capable of identifying the cause of sepsis (e.g., cytokines, toxins, pathogens, activated cells) and remove these substances in an intelligent, automated, and efficient manner. CytoSorbents contract is for advanced technology development of its hemocompatible porous polymer technologies to remove cytokines and a number of pathogen and biowarfare toxins from blood. CytoSorbents is in Year 3 of the program and is currently working with the recently announced systems integrator, Battelle Laboratories, and its subcontractor NxStage Medical, who are responsible for integrating the technology developed by CytoSorbents and others into a final medical device design prototype, and evaluating this device in septic animals and eventually in human clinical trials in sepsis. CytoSorbents work is supported by DARPA and SSC Pacific under Contract No. N66001-12-C-4199.

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Recent Corporate Actions

We have applied to list our Common Stock on the NASDAQ Capital Market under the symbol CTSO. In order to facilitate that process, in October 2014, the stockholders representing over 88 percent (88%) of the then-issued and outstanding Series A 10% Cumulative Convertible Preferred Stock, or the Series A Preferred Stock, elected to convert all issued and outstanding Series A Preferred Stock into Common Stock at the then-effective conversion price. As a result of the election, effective October 9, 2014, 1,894,969 shares of Series A Preferred Stock, representing all issued and outstanding shares of Series A Preferred Stock, were converted into 2,583,289 shares of Common Stock. Similarly, the stockholders representing over 93 percent (93%) of the then-issued and outstanding Series B 10% Cumulative Convertible Preferred Stock, or the Series B Preferred Stock, elected to convert all issued and outstanding Series B Preferred Stock into Common Stock. As a result of the election, effective October 9, 2014, 84,283.99 shares of Series B Preferred Stock were issued a dividend of 10%, and then the 92,712.27 shares of Series B Preferred Stock, representing all issued and outstanding shares of Series B Preferred Stock, were converted into 256,111,243 shares of Common Stock.

On December 1, 2014, we received stockholder approval authorizing our Board of Directors to (i) amend our Articles of Incorporation, as amended, to effect a reverse split of our Common Stock, with a reverse split ratio of twenty-five-to-one (25:1); (ii) amend our Articles of Incorporation, as amended, to reduce the total number of authorized shares of Common Stock from 800,000,000 to 50,000,000, after giving effect to the reverse stock split; (iii) amend our Articles of Incorporation, as amended, to reduce the total number of authorized shares of undesignated preferred stock from 100,000,000 to 5,000,000, after giving effect to the reverse stock split; (iv) implement the form, terms and provisions of the CytoSorbents Corporation 2014 Long-Term Incentive Plan; and (v) change our domicile from the State of Nevada to the State of Delaware through our merger with and into a newly-organized subsidiary organized under the laws of the State of Delaware.

On December 3, 2014 we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of the twenty-five-for-one (25:1) reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Based on the 582,097,092 shares of common stock outstanding as of December 3, 2014, the total number of shares of common stock outstanding after the reverse stock split, including accounting for fractional shares which were rounded up to the next whole number, were 23,284,040 shares. Immediately after the reverse split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. Pursuant to the Agreement and Plan of Merger, we adopted the certificate of incorporation, as amended and restated, and bylaws of our Delaware subsidiary as our certificate of incorporation and bylaws at effective time of the merger. At the effective time of our merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) our Delaware subsidiary became the surviving corporation, and (iv) each share of our common stock, $0.001 par value per share outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of common stock of CytoSorbents Corporation, a Delaware corporation, $0.001 par value per share. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by the our Board of Directors and stockholders representing a majority of our outstanding common stock.

On December 15, 2014, we issued a press release announcing the entry into an exclusive Distribution Agreement, or Distribution Agreement, with Fresenius Medical Care Deutschland GmbH, or Fresenius, an operating division of Fresenius Medical Care AG & CO KGaA. Although the Distribution Agreement marks a continuation of our long-term distribution strategy, we do not deem it material to us at this time, but it may become material at some time in the future. In accordance with the disclosure rules of the Securities and Exchange Commission, when such

agreement becomes material to us, we shall appropriately disclose the terms and conditions of such agreement and file such agreement (with confidential treatment requested).

Under the terms of the Distribution Agreement, Fresenius was granted exclusive rights to distribute our CytoSorb product and other blood purification products, or the Products, for critical care medicine and intensive care unit applications in France, Poland, Sweden, Denmark, Norway, and Finland, or collectively, the Territory. Fresenius s exclusivity is subject to Fresenius achieving certain annual minimum guaranteed orders of the Products. If Fresenius does not achieve the annual minimum guaranteed orders, then we may terminate

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the Distribution Agreement or change the exclusive rights granted to non-exclusive rights. Fresenius is obligated to register the Products with the appropriate governmental agencies for marketing approval in the Territory within six (6) months. Pricing is generally fixed for the term of the Distribution Agreement, but Fresenius is able to achieve volume discounts on pricing. The parties agree to negotiate, in good faith, an increase in the purchase price of the Products in the event the average selling price to customers increases or, on the other hand, if the costs of production for the Products decreases, a reduction in the purchase price.

The Distribution Agreement expires upon the third anniversary of the first Product registration in the Territory, but, in any event, no later than June 15, 2018, and is subject to renewal or renegotiation with mutual agreement at that time. During the term of the Distribution Agreement and for a period of one (1) year afterwards, Fresenius has agreed not to compete with us regarding the production or distribution of a competitive product in the Territory.

The Company

CytoSorbents Corporation was incorporated in Nevada on April 25, 2002 as Gilder Enterprises, Inc. and was originally engaged in the business of installing and operating computer networks that provided high-speed access to the Internet. On June 30, 2006, we disposed of our original business, and pursuant to an Agreement and Plan of Merger, acquired all of the stock of MedaSorb Technologies, Inc., a Delaware corporation, in a merger, and its business became our business. Following the merger, in July 2006 we changed our name to MedaSorb Technologies Corporation. In November 2008, we changed the name of our operating subsidiary from MedaSorb Technologies, Inc. to CytoSorbents, Inc. In May 2010, we finalized the name change of MedaSorb Technologies Corporation to CytoSorbents Corporation. On October 28, 2014, we changed the name of our operating subsidiary from CytoSorbents, Inc. to CytoSorbents Medical, Inc. Unless otherwise indicated, all references in this prospectus to MedaSorb , CytoSorbents , us or we with respect to events prior to June 30, 2006 are references to CytoSorbents Medical, Inc. and its predecessors.

On December 3, 2014 we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of the twenty-five-to-one (25:1) reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Based on the 582,097,092 shares of common stock outstanding as of December 3, 2014, the total number of shares of common stock outstanding after the reverse stock split, including accounting for fractional shares which were rounded up to the next whole number, were 23,284,040 shares. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. Pursuant to the Agreement and Plan of Merger, we adopted the certificate of incorporation, as amended and restated, and bylaws of our Delaware subsidiary as our certificate of incorporation and bylaws at effective time of the merger. At the effective time of our merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) our Delaware subsidiary became the surviving corporation, and (iv) each share of our common stock, $0.001 par value per share outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of common stock of CytoSorbents Corporation, a Delaware corporation, $0.001 par value per share. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by the our Board of Directors and stockholders representing a majority of our outstanding common stock. All references to us, we or the Company, on or after December 3, 2014, refer to CytoSorbents Corporation, a Delaware corporation.

We have experienced substantial operating losses since inception. As of September 30, 2014, we had an accumulated deficit of $113,902,629, which included losses of approximately $4,327,000 and $4,009,000 for the nine months ended September 30, 2014 and 2013, respectively. Historically, our losses have resulted principally from costs

incurred in the research and development of our polymer technology, and general and administrative expenses, which together were approximately $4,935,000 and $3,608,000 for the nine months ended September 30, 2014 and 2013, respectively. We may continue to incur losses in the future. In part due to these losses, our 2013 audited consolidated financial statements have been prepared assuming we will continue as a going concern, and the auditors report on those financial statements express substantial doubt about our ability to continue as a going concern.

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Since inception, our operations have been primarily financed through the private placement of our debt and equity securities. At September 30, 2014, we had current assets of approximately $8,954,000, including cash on hand and short-term investments of approximately $7,780,000 and current liabilities of approximately $1,549,000. We believe we have sufficient cash to fund its operations into 2016; however, we may need to raise additional capital to fully fund pivotal trials in the United States and/or Germany. We will be better able to assess this need once the specific protocols are finalized.

Our executive offices are located at 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852. Our telephone number is (732) 329-8885.

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The Offering

The summary below describes some of the terms of the offering. For a more complete description of the Common Stock comprising the securities, see Description of Securities.

Issuer

CytoSorbents Corporation.

Common Stock offered

2,000,000 shares of our common stock (the Offering).

Price per share

$.

Over-allotment option

We have granted the underwriters an option to purchase up to a total of 300,000 additional shares of Common Stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus.

Common Stock outstanding before the offering

As of December 3, 2014 there were 23,284,040 shares of the issuer s common stock, par value $0.001 (the Common Stock), outstanding.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. As a result, all references to shares of common stock, options and warrants, as well as per share data and related information in this prospectus have been retroactively adjusted, where applicable, to reflect the reverse stock split as if it had occurred at the beginning of the earliest period presented and all references to us, on or after December 3, 2014, refer to CytoSorbents Corporation, a Delaware corporation.

Common Stock outstanding after the offering

25,284,040 shares will be outstanding after the Offering.

Use of proceeds

We expect to use the proceeds received from the Offering to support our sales and marketing efforts, to fund clinical studies, to increase production capacity, to further develop our products, and for general working capital and other general corporate purposes.

Given that there is no minimum offering size of this Offering, it is possible that we could receive significantly less than the $11 million targeted in the Offering. See the section titled Use of Proceeds for additional information.

Risk factors

The Common Stock offered hereby involves a high degree of risk and should not be purchased by investors who cannot afford the loss of their entire investment. See Risk Factors beginning on page 9.

Joint Book-Running Managers

Brean Capital and H.C. Wainwright & Co.

Market and trading symbol

Our common stock is presently quoted on the OTCQB Marketplace, operated by the OTC Markets Group, Inc., (OTCQB), under the symbol CTSOD (until on or about January 4, 2015) and CTSO (beginning on or about January 5, 2015). On December 12, 2014, the last reported sale price of our common stock on the OTCQB was $5.29 per share. We have applied to list our common stock on the NASDAQ Capital

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Market (NASDAQ) under the symbol CTSO. There can be no assurances our common stock will be accepted for listing on the NASDAQ Capital Market.

Unless otherwise indicated, all numbers in this prospectus, including information relating to the number of shares of common stock outstanding immediately after completion of this offering, assume the underwriters do not exercise their option to purchase additional shares of our common stock.

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RISK FACTORS

An investment in our Common Stock involves a high degree of risk. You should carefully consider the risks described below before deciding to purchase our common stock. If any of the events, contingencies, circumstances or conditions described in the risks below actually occur, our business, financial condition or results of operations could be seriously harmed. The trading price of our Common Stock could, in turn, decline and you could lose all or part of your investment.

RISKS RELATED TO OUR INDUSTRY AND OUR BUSINESS

We require additional capital to continue operations.

As of September 30, 2014 we had current assets of approximately $8,954,000, including cash on hand of approximately $433,000, short-term investments of approximately $7,347,000 and current liabilities of approximately $1,549,000. On March 12, 2014, we received approximately $9,451,000 in net proceeds in connection with a registered offering of our Common Stock. Through September 30, 2014, our cash burn rate for fiscal year 2014 was approximately $4,143,000. Our current and historical cash burn rate is not necessarily indicative of our future use of cash and cash equivalents.

We may require additional financing in the future in order to complete additional clinical studies and to support the commercialization of our proposed products. There can be no assurance that we will be successful in our capital raising efforts.

Our long-term capital requirements are expected to depend on many factors, including:

continued progress and cost of our research and development programs;
progress with pre-clinical studies and clinical studies;
the time and costs involved in obtaining regulatory clearance in other countries and/or for other indications;
costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
costs of developing sales, marketing and distribution channels;
market acceptance of our products; and
cost for training physicians and other health care personnel.

Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

In addition, in the event that additional funds are obtained through arrangements with collaborative partners or other sources, we may have to relinquish economic and/or proprietary rights to some of our technologies or products under development that we would otherwise seek to develop or commercialize by ourselves.

We currently are in the process of commercializing our products, but there can be no assurance that we will be successful in developing commercial operations.

We have been engaged primarily in research and development activities and have generated limited revenues to date. There can be no assurance that we will be able to successfully manage the transition to a commercial enterprise. Potential investors should be aware of the problems, delays, expenses and difficulties frequently encountered by an enterprise in the early stage of development, which include unanticipated problems relating to development of proposed products, testing, regulatory compliance, manufacturing, competition, market adoption, marketing problems and additional costs and expenses that may exceed current estimates. Our proposed products will require significant additional research and testing, and we will need to overcome significant regulatory burdens prior to commercialization in other countries, such as the U.S., and for ongoing compliance for our CE Mark. We will also need to raise significant additional funds to complete additional clinical studies and obtain regulatory approvals in other countries before we can begin selling our products in markets not covered by the CE Mark. There can be no assurance that after the expenditure of substantial

We currently are in the process of commercializing our products, but therecan be no assurance that we will be succ

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funds and efforts, we will successfully develop and commercialize any products, generate any significant revenues or ever achieve and maintain a substantial level of sales of our products.

We have a history of losses and expect to incur substantial future losses, and the report of our auditor on our consolidated financial statements expresses substantial doubt about our ability to continue as a going concern.

We have experienced substantial operating losses since inception. As of September 30, 2014, we had an accumulated deficit of $113,902,629, which included net losses of $4,327,035 for the nine months ended September 30, 2014 and $4,008,720 for the nine months ended September 30, 2013. In part due to these losses, our audited consolidated financial statements have been prepared assuming we will continue as a going concern, and the auditors report on those financial statements express substantial doubt about our ability to continue as a going concern. Our losses have resulted principally from costs incurred in the research and development of our polymer technology and general and administrative expenses. Because our predecessor was a limited liability company until December 2005, substantially all of these losses were allocated to that company s members and will not be available for tax purposes to us in future periods. We intend to conduct significant additional research, development, and clinical study activities which, together with expenses incurred for the establishment of manufacturing arrangements and a marketing and distribution presence and other general and administrative expenses, are expected to result in continuing operating losses for the foreseeable future. The amount of future losses and when, if ever, we will achieve profitability are uncertain. Our ability to achieve profitability will depend, among other things, on successfully completing the development of our technology and commercial products, obtaining additional requisite regulatory approvals in markets not covered by the CE Mark and for potential label extensions of our current CE Mark, establishing manufacturing and sales and marketing arrangements with third parties, and raising sufficient funds to finance our activities. No assurance can be given that our product development efforts will be successful, that our current CE Mark will enable us to achieve profitability, that additional regulatory approvals in other countries will be obtained, that any of our products will be manufactured at a competitive cost and will be of acceptable quality, or that the we will be able to achieve profitability or that profitability, if achieved, can be sustained.

We depend upon key personnel who may terminate their employment with us at any time.

As of October 20, 2014 we had thirty-four full-time employees and eight full-time temporary employees. Our success will depend to a significant degree upon the continued services of our key management and advisors, including, Dr. Phillip Chan, our Chief Executive Officer; Kathleen P. Bloch, our Chief Financial Officer; Vincent Capponi, our Chief Operating Officer and Dr. Robert Bartlett our Chief Medical Officer, who works with us on a consulting basis. These individuals do not have long-term employment agreements, and there can be no assurance that they will continue to provide services to us. In addition, our success will depend on our ability to attract and retain other highly skilled personnel. We may be unable to recruit such personnel on a timely basis, if at all. Management and other employees may voluntarily terminate their employment with us at any time. The loss of services of key personnel, or the inability to attract and retain additional qualified personnel, could result in delays in development or approval of our products, loss of sales and diversion of management resources.

Our Chief Medical Officer works with us on a consulting basis.

Our Chief Medical Officer, Dr. Robert Bartlett, works with us on a consulting basis. Because of the part time nature of his consulting agreement, Dr. Bartlett may not always be available to provide us with his services when needed by us

in a timely manner.

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Acceptance of our medical devices in the marketplace is uncertain, and failure to achieve market acceptance will prevent or delay our ability to generate revenues.

Our future financial performance will depend, at least in part, upon the introduction and customer acceptance of our polymer products. Even with our approval to apply the CE Mark to our CytoSorb® device as a cytokine filter, our products may not achieve market acceptance in the European countries that recognize and accept the CE Mark. Additional approvals from other regulatory authorities (such as the U.S. Food and Drug Administration, or FDA) will be required before we can market our device in countries not covered by the CE Mark. There is no guarantee that we will be able to achieve additional regulatory approvals, and even if we do, our products may not achieve market acceptance in the countries covered by such approvals. The degree of market acceptance will depend upon a number of factors, including:

the receipt of regulatory clearance of marketing claims for the uses that we are developing;
the establishment and demonstration of the advantages, safety and efficacy of the our polymer technology;
pricing and reimbursement policies of government and third-party payers such as insurance companies, health maintenance organizations and other health plan administrators;
our ability to attract corporate partners, including medical device companies, to assist in commercializing our products; and
our ability to market our products.

Physicians, patients, payers or the medical community in general may be unwilling to accept, utilize or recommend any of our products. Approval of our CytoSorb® device as a cytokine filter as well as the data we have gathered in our clinical studies to support device usage in this indication may not be sufficient for market acceptance in the medical community. We may also need to conduct additional clinical studies to gather additional data for marketing purposes. If we are unable to obtain regulatory approval or commercialize and market our products when planned, we may not achieve any market acceptance or generate revenue.

Even with our approval to apply the CE Mark to our CytoSorb® device as a cytokine filter, there can be no assurance that the data from our limited clinical studies will be viewed as sufficient by the medical community to support the purchase of our products in substantial quantities or at all.

CytoSorb® is currently reimbursable in Germany and Austria. We plan to seek reimbursement for our product in other E.U. and non-E.U. countries to help further adoption. There can be no assurance when, or if, this additional reimbursement might be approved.

We may face litigation from third parties claiming that our products infringe on their intellectual property rights, or seek to challenge the validity of our patents.

Our future success is also dependent on the strength of our intellectual property, trade secrets and know-how, which have been developed from years of research and development. In addition to the Purolite litigation discussed below, we may be exposed to additional future litigation by third parties seeking to challenge the validity of our rights based on claims that our technologies, products or activities infringe the intellectual property rights of others or are invalid, or that we have misappropriated the trade secrets of others.

Since our inception, we have sought to contract with large, established manufacturers to supply commercial quantities of our adsorbent polymers. As a result, we have disclosed, under confidentiality agreements, various aspects of our technology with potential manufacturers. We believe that these disclosures, while necessary for our business, have resulted in the attempt by potential suppliers to improperly assert ownership claims to our technology in an attempt to gain an advantage in negotiating manufacturing rights.

We have previously engaged in discussions with the Brotech Corporation and its affiliate, Purolite International, Inc. (collectively Purolite), which had demonstrated a strong interest in being our polymer manufacturer. For a period of time beginning in December 1998, Purolite engaged in efforts to develop and optimize the manufacturing process needed to produce our polymer products on a commercial scale. However, the parties eventually decided not to proceed. In 2003, Purolite filed a lawsuit against us asserting, among other things, co-ownership and co-inventorship of certain of our patents. On September 1, 2006, the

We may face litigation from third parties claiming that our products infringeon their intellectual property rights, or see

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United States District Court for the Eastern District of Pennsylvania approved a Stipulated Order and Settlement Agreement under which we and Purolite agreed to the settlement of the action. The Settlement Agreement provides us with the exclusive right to use our patented technology and proprietary know how relating to adsorbent polymers for a period of 18 years. Under the terms of the Settlement Agreement, we have agreed to pay Purolite royalties of 2.5% to 5% on the sale of certain of our products if and when those products are sold commercially.

Several years ago we engaged in discussions with the Dow Chemical Company, which had indicated a strong interest in being our polymer manufacturer. After a Dow representative on our Advisory Board resigned, Dow filed and received several patents naming our former Advisory Board member as an inventor. In management s view the Dow patents improperly incorporate our technology and should not have been granted to Dow. The existence of these Dow patents could result in a potential dispute with Dow in the future and additional expenses for us.

We have commenced the process of seeking regulatory approvals of our products, but the approval process involves lengthy and costly clinical studies and is, in large part, not in the control of the Company. The failure to obtain government approvals, internationally or domestically, for our polymer products, or to comply with ongoing governmental regulations could prevent, delay or limit introduction or sale of our products and result in the failure to achieve revenues or maintain our operations.

CytoSorb® has already achieved European Union regulatory approval under the CE Mark and the Medical Devices Directive. It is manufactured at our manufacturing facility in New Jersey under ISO 13485 Full Quality Systems certification. The manufacturing and marketing of our products will be subject to extensive and rigorous government regulation in the European market, the United States, in various states and in other foreign countries. In the United States and other countries, the process of obtaining and maintaining required regulatory approvals is lengthy, expensive, and uncertain. There can be no assurance that we will ever obtain the necessary additional approvals to sell our products in the United States or other non E.U. countries. Even if we do ultimately receive FDA approval for any of our products, we will be subject to extensive ongoing regulation. While the Company has received approval from its Notified Body to apply the CE Mark to our CytoSorb® device, we will be subject to extensive ongoing regulation and auditing requirements to maintain the CE Mark.

Our products will be subject to international regulation as medical devices under the Medical Devices Directive. In Europe, which we expect to provide the initial market for our products, the Notified Body and Competent Authority govern, where applicable, development, clinical studies, labeling, manufacturing, registration, notification, clearance or approval, marketing, distribution, record keeping, and reporting requirements for medical devices. Different regulatory requirements may apply to our products depending on how they are categorized by the Notified Body under these laws. Current international regulations classify our CytoSorb® device as a Class IIb device. Even though we have received CE Mark certification of the CytoSorb® device, there can be no assurance that we will be able to continue to comply with the required annual auditing requirements or other international regulatory requirements that may be applicable. In addition, there can be no assurance that government regulations applicable to our products or the interpretation of those regulations will not change. The extent of potentially adverse government regulation that might arise from future legislation or administrative action cannot be predicted. There can be no assurances that reimbursement will be granted or that additional clinical data may be required to establish reimbursement.

We have conducted limited clinical studies of our CytoSorb® device. Clinical and pre-clinical data is susceptible to varying interpretations, which could delay, limit or prevent additional regulatory clearances.

We have commenced the process of seeking regulatory approvals of our products, but the approval process involve

To date, we have conducted limited clinical studies on our CytoSorb® product. There can be no assurance that we will successfully complete additional clinical studies necessary to receive additional regulatory approvals in markets not covered by the CE Mark. While studies conducted by us and others have produced results we believe to be encouraging and indicative of the potential efficacy of our products and technology, data already obtained, or in the future obtained, from pre-clinical studies and clinical studies do not necessarily predict the results that will be obtained from later pre-clinical studies and clinical studies. Moreover, pre-clinical and clinical data are susceptible to varying interpretations, which could delay, limit or prevent additional regulatory approvals. A number of companies in the medical device and pharmaceutical industries have

We have commenced the process of seeking regulatory approvals of our products, but the approval process involve

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suffered significant setbacks in advanced clinical studies, even after promising results in earlier studies. The failure to adequately demonstrate the safety and effectiveness of an intended product under development could delay or prevent regulatory clearance of the device, resulting in delays to commercialization, and could materially harm our business. Even though we have received approval to apply the CE Mark to our CytoSorb® device as a cytokine filter, there can be no assurance that we will be able to receive approval for other potential applications of CytoSorb®, or that we will receive regulatory clearance from other targeted regions or countries.

We rely extensively on research and testing facilities at various universities and institutions, which could adversely affect us should we lose access to those facilities.

Although we have our own research laboratories and clinical facilities, we collaborate with numerous institutions, universities and commercial entities to conduct research and studies of our products. We currently maintain a good working relationship with these parties. However, should the situation change, the cost and time to establish or locate alternative research and development could be substantial and delay gaining CE Mark for other potential applications or technologies, and/or FDA approval and commercializing our products.

We are and will be exposed to product liability risks, and clinical and preclinical liability risks, which could place a substantial financial burden upon us should we be sued.

Our business exposes us to potential product liability and other liability risks that are inherent in the testing, manufacturing and marketing of medical devices. We cannot be sure that claims will not be asserted against us. A successful liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

We cannot give assurances that we will be able to continue to obtain or maintain adequate product liability insurance on acceptable terms, if at all, or that such insurance will provide adequate coverage against potential liabilities. Claims or losses in excess of any product liability insurance coverage that we may obtain could have a material adverse effect on our business, financial condition and results of operations.

Certain university and other relationships are important to our business and may potentially result in conflicts of interests.

Dr. John Kellum and others, are critical care advisors and consultants of ours and are associated with institutions such as the University of Pittsburgh Medical Center. Their association with these institutions may currently or in the future involve conflicting interests in the event they or these institutions enter into consulting or other arrangements with competitors of ours.

We have limited manufacturing experience, and once our products are approved, we may not be able to manufacture sufficient quantities at an acceptable cost, or without shut-downs or delays.

In March, 2011 we received approval from our Notified Body to apply the CE Mark to our CytoSorb® device for commercial sale as a cytokine filter. CytoSorbents also achieved ISO 13485:2003 Full Quality Systems certification,

an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in the European Union. CytoSorbents manufactures CytoSorb® at its manufacturing facilities in New Jersey for sale in the E.U. and for additional clinical studies. We will need to maintain compliance on an ongoing basis. We have limited experience in establishing, supervising and conducting commercial manufacturing. If we or the third-party manufacturers of our products fail to adequately establish, supervise and conduct all aspects of the manufacturing processes, we may not be able to commercialize our products.

While we currently believe we have established sufficient production capacity to supply potential near term demand for the CytoSorb® device, we will need to scale up and increase our manufacturing capabilities in the future. No assurance can be given that we will be able to successfully scale up our manufacturing capabilities or that we will have sufficient financial or technical resources to do so on a timely basis or at all.

We have limited manufacturing experience, and once our products areapproved, we may not be able to manufactur

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Due to our limited marketing, sales and distribution experience, we may be unsuccessful in our efforts to sell our products.

We expect to enter into agreements with third parties for the commercial manufacture and distribution of our products. There can be no assurance that parties we may engage to market and distribute our products will:

satisfy their financial or contractual obligations to us;
adequately market our products; or
not offer, design, manufacture or promote competing products.

If for any reason any party we engage is unable or chooses not to perform its obligations under our marketing and distribution agreement, we would experience delays in product sales and incur increased costs, which would harm our business and financial results.

If we are unable to convince physicians and other health care providers as to the benefits of our products, we may incur delays or additional expense in our attempt to establish market acceptance.

Broad use of our products may require physicians and other health care providers to be informed about our products and their intended benefits. The time and cost of such an educational process may be substantial. Inability to successfully carry out this education process may adversely affect market acceptance of our products. We may be unable to educate physicians regarding our products in sufficient numbers or in a timely manner to achieve our marketing plans or to achieve product acceptance. Any delay in physician education may materially delay or reduce demand for our products. In addition, we may expend significant funds towards physician education before any acceptance or demand for our products is created, if at all.

The market for our products is rapidly changing and competitive, and new devices and drugs, which may be developed by others, could impair our ability to maintain and grow our business and remain competitive.

The medical device and pharmaceutical industries are subject to rapid and substantial technological change. Developments by others may render our technologies and products noncompetitive or obsolete. We also may be unable to keep pace with technological developments and other market factors. Technological competition from medical device, pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Many of these entities have significantly greater research and development capabilities and budgets than we do, as well as substantially more marketing, manufacturing, financial and managerial resources. These entities represent significant competition for us.

If users of our products are unable to obtain adequate reimbursement from third-party payers, or if new restrictive legislation is adopted, market acceptance of our products may be limited and we may not achieve anticipated revenues.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability, and the

future revenues and profitability of our potential customers, suppliers and collaborative partners and the availability of capital. For example, in certain foreign markets, pricing or profitability of medical devices is subject to government control. In the United States, given recent federal and state government initiatives directed at lowering the total cost of health care, the U.S. Congress and state legislatures will likely continue to focus on health care reform, the cost of medical devices and on the reform of the Medicare and Medicaid systems. While we cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of these proposals could materially harm our business, financial condition and results of operations.

Our ability to commercialize our products will depend in part on the extent to which appropriate reimbursement levels for the cost of our products and related treatment are obtained by governmental authorities, private health insurers and other organizations, such as health maintenance organizations (HMOs). Third-party payers are increasingly challenging the prices charged for medical care. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as

If users of our products are unable to obtain adequate reimbursement fromthird-party payers, or if new restrictive le

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HMOs, which could control or significantly influence the purchase of health care services and medical devices, as well as legislative proposals to reform health care or reduce government insurance programs, may all result in lower prices for our products. The cost containment measures that health care payers and providers are instituting and the effect of any health care reform could materially harm our ability to operate profitably.

CytoSorb® is currently reimbursable in Germany and Austria. We plan to seek reimbursement for our product in other E.U. and non-E.U. countries to help further adoption. There can be no assurance when, or if, this additional reimbursement might be approved.

RISKS RELATED TO THIS OFFERING, THE SECURITIES MARKETS AND OUR SECURITIES

The price of our Common Stock has been highly volatile due to factors that will continue to affect the price of our stock.

Our Common Stock closed as high as $0.35 and as low as $0.12 per share between January 1, 2014 and December 2, 2014. On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. As a result, on December 12, 2014 the closing price of our common stock, as reported on the OTCQB was $5.29. Historically, the over-the-counter markets for securities such as our Common Stock have experienced extreme price fluctuations. Some of the factors leading to this volatility include, but are not limited to:

fluctuations in our operating results;
announcements of product releases by us or our competitors;
announcements of acquisitions and/or partnerships by us or our competitors; and
general market conditions.

Although we have applied for listing on the NASDAQ Capital Market under the symbol CTSO , there is no assurance that we will be approved for listing on the NASDAQ Capital Market and that the price of our stock will not continue to be volatile in the future.

Our use of the offering proceeds may not yield a favorable return on your investment.

We currently anticipate that the net proceeds from this offering will be used primarily to support our sales and marketing efforts, to fund clinical studies, to increase production capacity, to further develop our products and for general working capital and other general corporate purposes. Pending the application of the net proceeds, we intend to invest the net proceeds in investment-grade or government, interest-bearing securities. Our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree. Pending the use of the proceeds in this offering, we will invest them. However, the proceeds may not be invested in a manner that yields a favorable or any return.

An investment in our Common Stock is extremely speculative and there can be no assurance of any return on any such investment.

An investment in our Common Stock is extremely speculative and there is no assurance that investors will obtain any return on their investment. Investors will be subject to substantial risks involved in an investment in us, including the risk of losing their entire investment.

Directors, executive officers and principal stockholders own a significant percentage of the shares of our Common Stock, which will limit your ability to influence corporate matters.

Our directors, executive officers and principal stockholders together beneficially own a significant percentage of the voting control of the Common Stock on a fully diluted basis. Accordingly, these stockholders could have a significant influence over the outcome of any corporate transaction or other matter submitted to

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stockholders for approval, including mergers, consolidations and the sale of all or substantially all of our assets and also could prevent or cause a change in control. The interests of these stockholders may differ from the interests of our other stockholders. Third parties may be discouraged from making a tender offer or bid to acquire us because of this concentration of ownership.

Penny stock regulations may affect your ability to sell our Common Stock.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. As a result, on December 12, 2014 the closing price of our common stock, as reported on the OTCQB was $5.29. We have applied to list our common stock on the NASDAQ Capital Market, but there can be no assurances that our stock will be accepted for listing. To the extent the price of our common stock trades below $5.00 per share, our common stock will be subject to Rule 15g-9 under the Exchange Act, which imposes additional sales practice requirements on broker dealers which sell these securities to persons other than established customers and accredited investors. Under these rules, broker-dealers who recommend penny stocks to persons other than established customers and accredited investors must make a special written suitability determination for the purchaser and receive the purchaser s written agreement to a transaction prior to sale. Unless an exception is available, the regulations require the delivery, prior to any transaction involving a penny stock, of a disclosure schedule explaining the penny stock market and the associated risks. The additional burdens imposed upon broker-dealers by these requirements could discourage broker-dealers from effecting transactions in our common stock and may make it more difficult for holders of our common stock to sell shares to third parties or to otherwise dispose of them.

Our Board of Directors may, without stockholder approval, issue and fix the terms of shares of preferred stock and issue additional shares of Common Stock adversely affecting the rights of holders of our common stock.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. Pursuant to the Agreement and Plan of Merger effecting the merger, we adopted the certificate of incorporation, as amended and restated, and bylaws of our Delaware subsidiary as our certificate of incorporation and bylaws at effective time of the merger. As a result, our certificate of incorporation, as amended and restated, authorizes the issuance of up to 5,000,000 shares of blank check preferred stock, with such designation rights and preferences as may be determined from time to time by the Board of Directors. Currently, our certificate of incorporation, as amended and restated, which was effective December 3, 2014, authorizes the issuance of up to 50,000,000 shares of common stock, of which approximately 26,715,960 shares remain available for issuance and may be issued by us without stockholder approval.

Anti-takeover provisions in our charter documents and under Delaware law could prevent or delay transactions that our stockholders may favor and may prevent stockholders from changing the direction of our business or our management.

Directors, executive officers and principal stockholders own a significantpercentage of the shares of our Common S

After giving effect to our merger into our wholly-owned Delaware Subsidiary, provisions of our certificate of incorporation, as amended and restated, and bylaws may discourage, delay or prevent a merger or acquisition that our stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares, and may also frustrate or prevent any attempt by stockholders to change the direction or management of us. For example, these provisions:

authorize the issuance of blank check preferred stock without any need for action by stockholders;
eliminate the ability of stockholders to call special meetings of stockholders;

Anti-takeover provisions in our charter documents and under Delaware lawcould prevent or delay transactions that

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prohibit stockholder action by written consent; and
establish advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

Compliance with changing corporate governance and public disclosure regulations may result in additional expense.

Keeping abreast of, and in compliance with, changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, new SEC regulations will require an increased amount of management attention and external resources. In addition, prior to the merger, our current management team was not subject to these laws and regulations, as the Company was a private corporation. We intend to continue to invest all reasonably necessary resources to comply with evolving standards, which may result in increased general and administrative expense and a diversion of management time and attention from revenue-generating activities to compliance activities.

As of September 30, 2014, our management determined that certain disclosure controls and procedures were ineffective, which could result in material misstatements of our financial statements.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. As of September 30, 2014, our management determined that its disclosure controls and procedures were not effective because of the following material weakness: Lack of an independent audit committee or audit committee financial expert. The Company is currently remediating this weakness, but there can be no assurance that it will be completely remediated in the near future.

While we do believe that our financial statements accurately reflect our financial results, it is possible that our ineffective controls and procedures and our material weaknesses in our internal control over financial reporting may result in us failing to meet our future reporting obligations on a timely basis, our consolidated financial statements may contain material misstatements, and we may be required to restate our prior period financial results.

We can give no assurance that any measures we plan to take in the future will remediate the ineffectiveness of our disclosure controls and procedures or that any material weaknesses will not arise in the future due to a failure to implement and maintain adequate internal control over financial reporting or adequate disclosure controls and procedures. In addition, even if we are successful in strengthening our disclosure controls and procedures or remediating our material weaknesses in our internal controls over financial reporting, in the future those controls and procedures and internal controls over financial reporting may not be adequate to prevent or identify irregularities or errors or to facilitate the fair presentation of our consolidated financial statements.

We have concluded that our disclosure controls and procedures are not effective. Additionally, we have determined that there are material weaknesses in our internal control over financial reporting. If this leads to us failing to meet our future reporting obligations on a timely basis or if our consolidated financial statements contain material misstatements it could negatively impact our business by requiring that we employ additional capital to restate our financial statements or cure any defects in our reporting which would result in us having less capital to use to develop our business. An untimely filing or material misstatement could also lead to a lack of confidence by our shareholders, potential investors and shareholders and could lead to our stock price significantly decreasing in value.

Our Common Stock is thinly traded on the OTCQB, and we may be unable to obtain listing of our Common Stock on a more liquid market.

Our Common Stock is quoted on the OTCQB, which provides significantly less liquidity than a securities exchange (such as the New York Stock Exchange or the Nasdaq Stock Market). We have applied to list our Common Stock on the NASDAQ Capital Market, but we cannot be certain that we will be accepted for a listing on the NASDAQ Capital Market.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the documents we incorporate by reference may contain forward-looking statements within the meaning of the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements about our plans, objectives, representations and contentions and are not historical facts and typically are identified by use of terms such as may, should, could, expect, plan, anticipate, believe, estimate, predict, potential, words, although some forward-looking statements are expressed differently. You should be aware that the forward-looking statements included herein represent management s current judgment and expectations, but our actual results, events and performance could differ materially from those in the forward-looking statements. The following documents, among others, describe these assumptions, risks, uncertainties, and other factors. You should read and interpret any forward-looking statements together with the following documents:

our most recent Annual Report on Form 10-K, including the sections entitled Business , Risk Factors and Management s Discussion and Analysis of Financial Condition and Results of Operations ;

our most recent Quarterly Report on Form 10-Q;

the risk factors contained in this prospectus under the caption Risk Factors ; and

our other filings with the Securities and Exchange Commission.

Any forward-looking statement speaks only as to the date on which that statement is made. We assume no obligation to update any forward-looking statement to reflect events or circumstances that occur after the date on which the statement is made.

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USE OF PROCEEDS

We estimate that we will receive up to $11,000,000 in gross proceeds from the sale of Common Stock in this Offering. After deducting estimated discounts and commissions to the Underwriters and estimated offering expenses payable by us, we expect net proceeds of approximately $10,130,000. We will use the net proceeds from this Offering to support our sales and marketing efforts, to fund clinical studies, to increase production capacity, to further develop our products and for general working capital and other general corporate purposes. Each $1.00 increase (decrease) in the public offering price per ordinary share would increase (decrease) our net proceeds, after deducting estimated underwriting discounts and commissions and estimated offering expenses, payable by us, by approximately $1.88 million.

We intend to use the net proceeds as follows:

approximately $5,000,000 to fund clinical studies.
approximately $3,500,000 for expansion of production capacity.
approximately $500,000 to support our sales and marketing efforts.
approximately $500,000 for development of our products.
all other amounts will be used be used for general working capital purposes.

Our management will have broad discretion to allocate net proceeds to us from this Offering. We reserve the right to change the use of these proceeds as a result of certain contingencies such as competitive developments, the result of our sales and marketing efforts and other factors. Pending use of the proceeds as described above, we intend to invest the net proceeds of this Offering in short-term, interest-bearing, investment-grade securities or certificates of deposit.

In the event that we do not raise the expected capital of $11,000,000, we would apply the funds as stated above but would also need to raise additional funding to complete our business goals. We do not know the amounts or source of the funds and will be required to attempt additional financing.

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DILUTION

Our reported net tangible book value as of September 30, 2014 was $7,654,599, or $0.33 per share of Common Stock, based upon 23,258,801 shares outstanding as of that date adjusted for the subsequent conversion of the preferred shares into common shares and the twenty-five-for-one reverse split. Net tangible book value per share is determined by dividing such number of outstanding shares of common stock into our net tangible book value, which are our total tangible assets less total liabilities. After giving effect to the sale of shares in this offering at an estimated offering price of $5.50 per share, after deducting payments of discounts and commissions to the Underwriters and other estimated offering expenses payable by us, our net tangible book value at September 30, 2014 would have been approximately $17,785,000, or $0.70 per share after giving effect to our December 3, 2014 twenty-five-for-one reverse spilt of our common stock and merger with and into our recently formed, wholly-owned Delaware subsidiary. This represents an immediate increase in net tangible book value of approximately $0.37 per share to our existing stockholders, and an immediate dilution of $(0.00) per share to investors purchasing shares in the Offering.

The following table illustrates the per share dilution to investors purchasing shares in the offering:

Public offering price per share, estimated	$ 5.50	
Net tangible book value per share as of September 30, 2014	$ 0.33	
Increase per share attributable to sale of shares to investors	$ 0.37	
As adjusted net tangible book value per share after the Offering	$ 0.70	
Dilution per share to investors	$	
Dilution as a percentage of the offering price	0.0	%

The dilution information discussed above is illustrative only and will change based on the actual offering price and other terms of this Offering determined at pricing.

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DESCRIPTION OF BUSINESS

Overview

We are a critical care focused immunotherapy company using blood purification to modulate inflammation with the goal of preventing or treating multiple organ failure in life-threatening illnesses. The technology is based upon biocompatible, highly porous polymer sorbent beads that are capable of extracting unwanted substances from blood and other bodily fluids. The technology is protected by 32 issued U.S. patents with multiple patent applications pending both in the United States and internationally. Our intellectual property consists of composition of matter, materials, methods of production, systems incorporating the technology and multiple medical uses with expiration dates ranging from 3 to 12 years.

In March 2011, we received E.U. regulatory approval under the CE Mark and Medical Devices Directive for our flagship product, CytoSorb®, as an extracorporeal cytokine filter indicated for use in clinical situations where cytokines are elevated. The goal of the CytoSorb® is to prevent or treat organ failure by reducing cytokine storm and the potentially deadly systemic inflammatory response syndrome in diseases such as sepsis, trauma, burn injury, acute respiratory distress syndrome, pancreatitis, liver failure, and many others. Organ failure is the leading cause of death in the intensive care unit, and remains a major unmet medical need, with little more than supportive care therapy (e.g. mechanical ventilation, dialysis, vasopressors, fluid support, etc.) as treatment options. By potentially preventing or treating organ failure, CytoSorb® may improve clinical outcome, including survival, while reducing the need for costly intensive care unit treatment, thereby potentially saving significant healthcare costs.

Our CE Mark enables CytoSorb® to be sold throughout the entire European Union. In addition, many countries outside the E.U. accept CE Mark approval for medical devices, but may also require registration with or without additional clinical studies. The broad approved indication enables CytoSorb® to be used on-label in diseases where cytokines are elevated including, but not limited to, critical illnesses such as those mentioned above, autoimmune disease flares, cancer cachexia, and many other conditions where cytokine-induced inflammation plays a detrimental role.

As part of the CE Mark approval process, we completed our randomized, controlled, European Sepsis Trial among 14 trial sites in Germany in 2011, with enrollment of 100 patients with sepsis and respiratory failure. The trial established that CytoSorb® was safe in this critically-ill population, and that it was able to control cytokine storm and broadly reduce key cytokines.

We plan to do larger, prospective studies in septic patients in the future to confirm the European Sepsis Trial findings.

In addition to CE Mark approval, CytoSorbents also achieved ISO 13485:2003 Full Quality Systems certification, an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in the European Union. CytoSorbents manufactures CytoSorb® at its manufacturing facilities in New Jersey for sale in the E.U. and for additional clinical studies. We also established a reimbursement path for CytoSorb® in Germany and Austria.

From September 2011 through June 2012, we began a controlled market release of CytoSorb® in select geographic territories in Germany with the primary goal of preparing for commercialization of CytoSorb® in Germany in terms of manufacturing, reimbursement, logistics, infrastructure, marketing, contacts, and other key issues.

In late June 2012, following the establishment of our European subsidiary, CytoSorbents Europe GmbH, CytoSorbents began the commercial launch of CytoSorb® in Germany with the hiring of Dr. Christian Steiner as Vice President of Sales and Marketing and three additional sales representatives who joined us and completed their sales training in Q3 2012. The fourth quarter of 2012 represented the first full quarter of direct sales with the full sales team in place. During this period, we expanded our direct sales efforts to include both Austria and Switzerland. At the end of Q1 2014, we had more than 100 key opinion leaders, or KOLs, in critical care, cardiac surgery, and blood purification who were either using CytoSorb® or committed to using CytoSorb® in the near future.

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In addition, we now have more than 40 investigator initiated studies being planned in Germany, Austria, and the United Kingdom in multiple applications including sepsis, cardiac surgery, lung injury, trauma, pancreatitis, liver failure, kidney failure, and others, with many already enrolling patients. These studies are being supported by our European Director of Scientific Affairs. As of September 30, 2014, our sales force includes seven direct sales people and two sales support staff. We intend to add more staff to the direct sales and marketing team in the future.

We have complemented our direct sales efforts with sales to distributors and/or corporate partners. In 2013, we reached agreement with distributors in the United Kingdom, Ireland, Turkey, Russia, and the Netherlands. In September 2013, we entered into a strategic partnership with Biocon Ltd., Asia s largest biotech company with an initial distribution agreement for India and select emerging markets, under which Biocon will have the exclusive commercialization rights for CytoSorb®. In April, 2014, we announced distribution of CytoSorb® in the Middle East, including Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, Bahrain, and Oman (the Gulf Cooperation Council or GCC) and Yemen, Iraq, and Jordan through an exclusive agreement with Techno Orbits. In August 2014, the Company announced distribution in Taiwan with Hemoscien Corporation. We are currently evaluating other potential distributor networks in other major countries where we are either approved to market the device or where CE Mark approval is accepted.

We are currently conducting a dose ranging trial in Germany among eight clinical trial sites to evaluate the safety and efficacy of CytoSorb® when used for longer periods of time. Data from this dosing study is intended to help clinicians with additional treatment options for CytoSorb®, help support the positive clinical data from our first European Sepsis Trial, and help shape the trial protocol for a U.S. based pivotal study. In addition, we will receive additional data from the results of more than forty investigator-initiated studies in Europe which are either currently underway or planned.

Concurrent with our commercialization plans, we intend to conduct or support additional clinical studies in sepsis, cardiac surgery, and other critical care diseases to generate additional clinical data to expend the scope of clinical experience for marketing purposes, to increase the number of treated patients, and to support potential future publications. We are currently organizing a pivotal trial in the U.S. using CytoSorb® during cardiac surgury that is intended to be the basis of our application seeking U.S. regulatory approval.

The market focus for CytoSorb® is the prevention or treatment of organ failure in life-threatening conditions, including commonly seen illnesses in the intensive care unit such as infection and sepsis, trauma, burn injury, acute respiratory distress syndrome, or ARDS, and others. Sepsis is a major unmet medical need with no approved products in the U.S. or Europe to treat it. As with other critical care illnesses, multiple organ failure is the primary cause of death in sepsis. When used with standard of care therapy, that includes antibiotics, the goal of CytoSorb® in sepsis is to reduce excessive levels of cytokines and other inflammatory toxins, to help reduce the severe inflammatory response syndrome, or SIRS, response and either prevent or treat organ failure.

In addition to the sepsis indication, we intend to continue to foster research in other critical care illnesses where CytoSorb® could be used, such as ARDS, trauma, severe burn injury and acute pancreatitis, or in other acute conditions that may benefit by the reduction of cytokines in the bloodstream. Some examples include the prevention of post-operative complications of cardiac surgery (cardiopulmonary bypass surgery) and damage to organs donated for transplant prior to organ harvest.

Our proprietary hemocompatible porous polymer bead technology forms the basis of a broad technology portfolio. Some of our products include:

CytoSorb® an extracorporeal hemoperfusion cartridge approved in the E.U. for cytokine removal, with the goal of reducing SIRS and preventing or treating organ failure.

HemoDefend™ a development-stage blood purification technology designed to remove contaminants in blood transfusion products. The goal is to reduce transfusion reactions and improve the safety of older blood.

ContrastSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove

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IV contrast from the blood of high risk patients undergoing CT imaging with contrast, or interventional radiology procedures such as cardiac catheterization. The goal is to prevent contrast-induced nephropathy.

DrugSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove toxic chemicals from the blood (e.g. drug overdose, high dose regional chemotherapy, etc.).

BetaSorb™ a development-stage extracorporeal hemoperfusion cartridge designed to remove mid-molecular weight toxins, such as b2-microglobulin, that standard high-flux dialysis cannot remove effectively. The goal is to improve the efficacy of dialysis or hemofiltration.

We have been successful in obtaining technology development contracts and support from agencies in the U.S. Department of Defense, including DARPA, the U.S. Army, and the U.S. Air Force.

In September 2013, the National Heart, Lung, and Blood Institute (NHLBI), a division of the National Institutes of Health (NIH), awarded us a Phase I Small Business Innovation Research (SBIR) contract to further advance our HemoDefend™ blood purification technology for RBC transfusions. The project, entitled Elimination of blood contaminants from pRBCs using HemoDefend™ hemocompatible porous polymer beads, was $203,351 over six months. The overall goal of the program was to reduce the risk of potential side effects of blood transfusions, and help to extend the useful life of pRBCs.

In June 2013, we announced that the U.S. Air Force will fund a 30 patient, single site, randomized controlled human pilot study in the United States amongst trauma patients with rhabdomyolysis most commonly associated with trauma. The FDA has approved our Investigational Device Exemption (IDE) application for this study, and the study began in April 2014.

In June 2013, we began work on our previously announced $1 million Phase II SBIR U.S. Army contract to further develop our technology for the treatment of burn injury and trauma in animal models. This work is supported by the U.S. Army Medical Research and Material Command under an amendment to Contract W81XWH-12-C-0038 and has now received committed funding of $1.15 million to date.

In August 2012, we were awarded a $3.8 million contract by the Defense Advanced Research Projects Agency (DARPA) for our Dialysis-Like Therapeutics program to treat sepsis. DARPA has been instrumental in funding many of the major technological and medical advances since its inception in 1958, including development of the Internet, the GPS, and robotic surgery. The DLT program in sepsis seeks to develop a therapeutic blood purification device that is capable of identifying the cause of sepsis (e.g., cytokines, toxins, pathogens, activated cells) and remove these substances in an intelligent, automated, and efficient manner. Our contract is for advanced technology development of our hemocompatible porous polymer technologies to remove cytokines and a number of pathogen and biowarfare toxins from blood. We are in Year 2 of the program and are currently working with the recently announced systems integrator, Battelle Laboratories, and its subcontractor NxStage Medical, who are responsible for integrating the technology developed by us and others into a final medical device design prototype, and evaluating this device in septic animals and eventually in human clinical trials in sepsis. Our work is supported by DARPA and SSC Pacific under Contract No. N66001-12-C-4199.

Corporate History

CytoSorbents Corporation was incorporated in Nevada on April 25, 2002 as Gilder Enterprises, Inc. and was originally engaged in the business of installing and operating computer networks that provided high-speed access to the Internet. On June 30, 2006, we disposed of our original business, and pursuant to an Agreement and Plan of Merger, acquired all of the stock of MedaSorb Technologies, Inc., a Delaware corporation, in a merger, and its business became our business. Following the merger, in July 2006 we changed our name to MedaSorb Technologies

Corporation. In November 2008, we changed the name of our operating subsidiary from MedaSorb Technologies, Inc. to CytoSorbents, Inc. In May 2010, we finalized the name change of MedaSorb Technologies Corporation to CytoSorbents Corporation. On October 28, 2014, we changed the name of our operating subsidiary from CytoSorbents, Inc. to CytoSorbents Medical, Inc. Unless otherwise indicated, all references in this prospectus to MedaSorb , CytoSorbents , us or we with respect to

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events prior to June 30, 2006 are references to CytoSorbents Medical, Inc. and its predecessors. Our executive offices are located at 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852. Our telephone number is (732) 329-8885.

On December 3, 2014 we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of the twenty-five-to-one (25:1) reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Based on the 582,097,092 shares of common stock outstanding as of December 3, 2014, the total number of shares of common stock outstanding after the reverse stock split, including accounting for fractional shares which were rounded up to the next whole number, were 23,284,040 shares. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. Pursuant to the Agreement and Plan of Merger, we adopted the certificate of incorporation, as amended and restated, and bylaws of our Delaware subsidiary as our certificate of incorporation and bylaws at effective time of the merger. At the effective time of our merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) our Delaware subsidiary became the surviving corporation, and (iv) each share of our common stock, $0.001 par value per share outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of common stock of CytoSorbents Corporation, a Delaware corporation, $0.001 par value per share. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by the our Board of Directors and stockholders representing a majority of our outstanding common stock. All references to us, we or the Company, on or after December 3, 2014, refer to CytoSorbents Corporation, a Delaware corporation.

CytoSorbents was originally organized as a Delaware limited liability company in August 1997 as Advanced Renal Technologies, LLC. The Company changed its name to RenalTech International, LLC in November 1998, and to MedaSorb Technologies, LLC in October 2003. In December 2005, MedaSorb converted from a limited liability company to a corporation.

CytoSorbents has been engaged in research and development since its inception, had raised approximately $86 million from investors. These proceeds have been used to fund the development of multiple product applications and to conduct clinical studies. These funds have also been used to establish in-house manufacturing capacity to meet clinical testing needs, expand our intellectual property through additional patents and to develop extensive proprietary know-how with regard to our products.

We have raised funds through various means including convertible note offerings and equity transactions. Our three most significant financing transactions are discussed below.

Principal Terms of the March 2014 $10,200,000 Equity Offering

On March 7, 2014, we entered into subscription agreements with certain investors providing for the issuance and sale by us (the March Offering) of 40,800,000 units (the Units) for an aggregate purchase price of $10,200,000. Each Unit is comprised of one share of our common stock, priced at $0.25 per share, par value $0.001 per share and a warrant to purchase 0.50 shares of common stock at an exercise price of $0.3125 per share. The warrants are convertible into a total of 20,400,000 shares of common stock. Each warrant is exercisable for a period of five (5) years beginning on March 11, 2014, the date of the closing of the sale of these securities, and are only exercisable for cash if at the time of exercise there is an effective registration statement registering the warrants and shares underlying the warrants. The exercise price of the warrants are subject to certain adjustment provisions, including adjustments for the issuance of stock dividends, subsequent equity sales below the then-current exercise price and fundamental transactions. Upon the sale, grant or other disposition or issuance of any Company Common Stock or equity equivalent securities at an

effective price per share less than the then-current exercise price of the warrants, the exercise price of the warrants shall be reduced to equal the price per share of such disposition or issuance. Upon the occurrence of any such issuance or disposition, the holder is entitled to receive a number of warrant shares based upon the price per share of such disposition or issuance.

We received net proceeds from the March Offering of approximately $9,451,000 million. The net proceeds received by us from the March Offering will be used for building additional sales and marketing infrastructure, clinical studies, working capital and general corporate purposes.

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We conducted the March Offering pursuant to a registration statement on Form S-1 (File No. 333-193053) which was declared effective by the Securities and Exchange Commission on February 14, 2014 and an additional registration statement on Form S-1 (File No. 333-194394) to register an additional amount of securities having a proposed maximum aggregate offering price of $2,762,500, which increased the total registered amount to $16,575,000 assuming the full cash exercise of the warrants for cash. We filed a final prospectus on March 7, 2014, disclosing the final terms of the March Offering.

In connection with the March Offering, on March 7, 2014, we entered into a placement agency agreement with Brean Capital, LLC pursuant to which the placement agent agreed to act as our exclusive placement agent for the March Offering and sale of the Units.

In connection with the successful completion of the March Offering, the placement agent received an aggregate cash placement agent fee equal to 6% of the gross proceeds of the sale of the Units in the March Offering and a warrant to purchase 1,224,000 shares of common stock at an exercise price of $0.30 per share exercisable for five years from the effective date of the placement agency agreement. The placement agent warrant contains piggy-back registration rights which expire on the fifth anniversary of the effective date of the registration statement. We have also agreed to reimburse the placement agent for actual out-of-pocket expenses up to a maximum of 2% of gross proceeds from the transaction. We also granted the placement agent a right of first refusal to participate in any subsequent offering or placement of our securities that takes place within twelve months following the effective date of the registration statement.

Principal Terms of the Series A Financing Consummated upon the Closing of the Merger

On June 30, 2006, immediately following the Merger, we sold to four institutional investors, in a private offering generating gross proceeds of $5.25 million, an aggregate of 5,250,000 shares of our Series A 10% Cumulative Convertible Preferred Stock initially convertible into 4,200,000 shares of common stock, and five-year warrants to purchase an aggregate of 2,100,000 shares of our common stock.

The Series A Preferred Stock has a stated value of $1.00 per share. The Series A Preferred Stock is not redeemable at the holder s option but may be redeemed by us at our option following the third anniversary of the issuance of the Series A Preferred Stock for 120% of the stated value thereof plus any accrued but unpaid dividends upon 30 days prior written notice (during which time the Series A Preferred Stock may be converted), provided a registration statement is effective under the Securities Act with respect to the shares of our common stock into which such Series A Preferred Stock is then convertible, and an event of default, as defined in the Certificate of Designations relating to the Series A Preferred Stock is not then continuing.

The Series A Preferred Stock has a dividend rate of 10% per annum, payable quarterly. The dividend rate increases to 20% per annum upon the occurrence of the events of default specified in the Certificate of Designations. Dividends may be paid in cash or, provided no event of default is then continuing, with additional shares of Series A Preferred Stock valued at the stated value thereof. The Series A Preferred Stock is convertible into common stock at the conversion rate of one share of common stock for each $1.25 of stated value or accrued but unpaid dividends converted.

The warrants issued in the private placement have an initial exercise price of $2.00 per share. The aggregate number of shares of common stock covered by the warrants equaled, at the date of issuance, one-half the number of shares of common stock issuable upon the full conversion of the Series A Preferred Stock issued to the investors on that date.

We agreed to file a registration statement under the Securities Act covering the common stock issuable upon conversion of the Series A Preferred Stock and exercise of the warrants within 120 days following closing of the private placement and to cause it to become effective within 240 days of that closing. We also granted the investors demand and piggyback registration rights with respect to such common stock.

Because the registration statement we agreed to file was not declared effective within the time required under our agreements with the June 30, 2006 purchasers of the Series A Preferred Stock, dividends on the shares of Series A Preferred Stock issued to those purchasers accrued at the rate of 20% per annum from February 26, 2007 until May 7, 2007, the date the registration statement was declared effective. During this time period, we were obligated to pay those purchasers cash dividends and an aggregate of $105,000 per 30-day period from February 26, 2007 through the date such registration statement was declared effective (May 7, 2007) in cash.

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Pursuant to a settlement agreement with the June 30, 2006 purchasers of Series A Preferred Stock, all cash dividends and damages were paid for in full with additional shares of Series A Preferred Stock.

Both the conversion price for the June 30, 2006 purchasers of the Series A Preferred Stock and the exercise price of the warrants were subject to full-ratchet anti-dilution provisions, so that upon future issuances of our common stock or equivalents thereof, subject to specified customary exceptions, at a price below the conversion price of the Series A Preferred Stock and/or exercise price of the warrants, the conversion price and/or exercise price will be reduced to the lower price. As of the Qualified Closing of our Series B Preferred Stock private placement in August of 2008, these investors agreed to a modification of their rights and pricing and gave up their anti-dilution protection.

In connection with the sale of the Series A Preferred Stock and warrants to the four institutional investors, to induce those investors to make the investment, Margie Chassman pledged to those investors securities of other publicly traded companies. The pledged securities consisted of a $400,000 promissory note of Xechem International, Inc. convertible into Xechem common stock at $.005 per share, and 250,000 shares of the common stock of Novelos Therapeutics, Inc. Based on the market value of the Xechem common stock ($0.07 per share) and the Novelos common stock ($1.03) per share, on June 30, 2006, the aggregate fair market value of the pledged securities at the date of pledge was approximately $5,857,500.

The terms of the pledge provided that in the event those investors suffered a loss on their investment in our securities as of June 30, 2007 (as determined by actual sales by those investors or the market price of our common stock on such date), the investors would be entitled to sell all or a portion of the pledged securities so that the investors receive proceeds from such sale in an amount equal to their loss on their investment in our securities. In consideration of her pledge to these investors, we paid Ms. Chassman (i) $525,000 in cash (representing 10% of the cash amount raised from the institutional investors), and (ii) five-year warrants to purchase:

525,000 shares of Series A Preferred Stock (representing 10% of the Series A Preferred Stock purchased by those investors); and
warrants to purchase 210,000 shares of common stock at an exercise price of $2.00 per share (representing 10% of the Series A Preferred Stock purchased by those investors), for an aggregate exercise price of $525,000.

As of the Qualified Closing of our Series B Preferred Stock private placement in August of 2008, Ms. Chassman agreed to a modification of her rights and pricing and gave up her anti-dilution protection.

Principal Terms of the Series B Financing Consummated in 2008

Each share of Series B Preferred Stock has a stated value of $100.00, and is convertible at the holder s option into that number of shares of common stock equal to the Series B stated value at a conversion price of $0.0362, subject to certain adjustments. Additionally, upon the occurrence of a stock split, stock dividend, combination of the common stock into a smaller number of shares, issuance of any of shares of common stock or other securities by reclassification of the common stock, merger or sale of substantially all of our assets, the conversion rate will be adjusted so that the conversion rights of the Series B Preferred Stock stockholders will remain equivalent to those prior to such event.

Dividend

The holders of Series B Preferred Stock are entitled to receive preferential dividends payable in shares of additional Series B Preferred Stock. Any dividends payable to both the Series A and Series B Preferred shareholders shall be paid before any dividend or other distribution will be paid to any common stock shareholder. The Series B Preferred Stock dividend is based payable at a rate of 10% per annum on the Series B Stated Value payable on the last day of

each calendar quarter after June 30, 2008. However, upon the occurrence of any Event of Default as defined in the Certificate of Designation of Series B Preferred Stock, the dividend rate increases to 20% per annum, and revert back to 10% after the Event of Default is cured. An Event of Default includes, but is not limited to,

the occurrence of Non-Registration Events ;

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an uncured breach by us of any material covenant, term or condition in the Certificate of Designation or any of the related transaction documents; and

any money judgment or similar final process being filed against us for more than $100,000.

Dividends must be delivered to the holder of the Series B Preferred Stock no later than five (5) business days after the end of each period for which dividends are payable. Dividends on the Series B Preferred Stock will be made in additional shares of Series B Preferred Stock, valued at the Series B Preferred Stock stated value. Notwithstanding the foregoing, during the first three-years following the initial closing, upon the approval of the holders of a majority of the Series B Preferred Stock, including the lead investor, NJTC Investment Fund, if it then owns 25% of the shares of Series B Preferred Stock initially purchased by it, we may pay dividends in cash instead of additional shares of Series B Preferred Stock, and after such three-year period, the holders of a majority of the Series B Preferred Stock, including NJTC if it then owns the 25% of the shares of the Series B Preferred Stock initially purchased by it, may require us to make such payments in cash.

Conversion of Series A and Series B Shares into Shares of Common Stock

On October 9, 2014, the Company filed with the Nevada Secretary of State an Amendment, or the Series A Amendment, to the Certificate of Designation, as amended, or the Series A Certificate of Designation, of the Series A Preferred Stock. The Series A Amendment, which became effective on October 9, 2014, (i) amends the Series A Certificate of Designation to allow the stockholders representing eighty percent (80%) of the issued and outstanding shares of Series A Preferred Stock to elect to convert all issued and outstanding shares of Series A Preferred Stock into Common Stock, at the then-effective Conversion Price, as defined in the Series A Certificate of Designation, and (ii) in consideration for such amendment, amends the Conversion Price from $1.25 per share to $0.77 per share, except with respect to the shares of Series A Preferred Stock covered by that certain Agreement and Consent dated as of June 25, 2008 by and among the Company and certain holders of Series A Preferred Stock. Immediately following effectiveness of the Series A Amendment, the stockholders representing over 88 percent (88%) of the then-issued and outstanding Series A Preferred Stock elected to convert all issued and outstanding Series A Preferred Stock into Common Stock at the Conversion Price, as amended. As a result of the election, 1,894,969 shares of Series A Preferred Stock have been converted into 2,583,289 shares of Common Stock.

The Series A Amendment was approved by the Board of Directors of the Company, as well as by over 88 percent (88%) of the Series A Preferred Stock.

On October 9, 2014, the Company also filed with the Nevada Secretary of State an Amendment, or the Series B Amendment, to the Certificate of Designation, or the Series B Certificate of Designation, of the Series B Preferred Stock. The Series B Amendment, which became effective on October 9, 2014, amends the Series B Certificate of Designation to allow the holders of a majority of the Series B Preferred Stock, including NJTC Investment Fund, LP, to elect to convert all issued and outstanding shares of Series B Preferred Stock into Common Stock.

Immediately following effectiveness of the Series B Amendment, the stockholders representing over 93 percent (93%) of the then-issued and outstanding Series B Preferred Stock elected to convert all issued and outstanding Series B Preferred Stock into Common Stock. Each share of Series B Preferred Stock has a stated value of $100.00, or the Series B Stated Value, and is convertible into that number of shares of Common Stock equal to the Series B Stated Value at a conversion price of $0.036 (which remained unchanged in this process). As more fully described below, as consideration for the Series B Amendment the holders of Series B Preferred Stock received a one-time dividend equal to ten percent (10%) of the shares of Series B Preferred Stock then held. As a result of the election by the holders of Series B Preferred Stock and the one-time dividend, 84,283.99 shares of Series B Preferred Stock have been converted into 256,111,243 shares of Common Stock.

The Series B Amendment was approved by the Board, as well as by over 93 percent (93%) of the Series B Preferred Stock.

The foregoing description of the amendment to the rights of the Series B Preferred Stock is qualified in its entirety by the provisions of the Series B Amendment, filed as Exhibit 3(i).10 hereto.

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After giving effect to the conversions of the Series A Preferred Stock and Series B Preferred Stock described above, there are no shares of Preferred Stock of the Company issued and outstanding.

Recent Corporate Actions

We have applied to list our Common Stock on the NASDAQ Capital Market under the symbol CTSO. In order to facilitate that process, in October 2014, the stockholders representing over 88 percent (88%) of the then-issued and outstanding Series A 10% Cumulative Convertible Preferred Stock, or the Series A Preferred Stock, elected to convert all issued and outstanding Series A Preferred Stock into Common Stock at the then-effective conversion price. As a result of the election, effective October 9, 2014, 1,894,969 shares of Series A Preferred Stock, representing all issued and outstanding shares of Series A Preferred Stock, were converted into 2,583,289 shares of Common Stock. Similarly, the stockholders representing over 93 percent (93%) of the then-issued and outstanding Series B 10% Cumulative Convertible Preferred Stock, or the Series B Preferred Stock, elected to convert all issued and outstanding Series B Preferred Stock into Common Stock. As a result of the election, effective October 9, 2014, 84,283.99 shares of Series B Preferred Stock were issued a dividend of 10%, and then the 92,712.27 shares of Series B Preferred Stock, representing all issued and outstanding shares of Series B Preferred Stock, were converted into 256,111,243 shares of Common Stock.

On December 1, 2014, we received stockholder approval authorizing our Board of Directors to (i) amend our Articles of Incorporation, as amended, to effect a reverse split of our Common Stock, with a reverse split ratio of twenty-five-to-one (25:1); (ii) amend our Articles of Incorporation, as amended, to reduce the total number of authorized shares of Common Stock from 800,000,000 to 50,000,000, after giving effect to the reverse stock split; (iii) amend our Articles of Incorporation, as amended, to reduce the total number of authorized shares of undesignated preferred stock from 100,000,000 to 5,000,000, after giving effect to the reverse stock split; (iv) implement the form, terms and provisions of the CytoSorbents Corporation 2014 Long-Term Incentive Plan; and (v) change our domicile from the State of Nevada to the State of Delaware through our merger with and into a newly-organized subsidiary organized under the laws of the State of Delaware. On December 3, 2014 we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of the twenty-five-for-one (25:1) reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Based on the 582,097,092 shares of common stock outstanding as of December 3, 2014, the total number of shares of common stock outstanding after the reverse stock split, including accounting for fractional shares which were rounded up to the next whole number, were 23,284,040 shares. Immediately after the reverse split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. Pursuant to the Agreement and Plan of Merger, we adopted the certificate of incorporation, as amended and restated, and bylaws of our Delaware subsidiary as our certificate of incorporation and bylaws at effective time of the merger. At the effective time of our merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) our Delaware subsidiary became the surviving corporation, and (iv) each share of our common stock, $0.001 par value per share outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of common stock of CytoSorbents Corporation, a Delaware corporation, $0.001 par value per share. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by the our Board of Directors and stockholders representing a majority of our outstanding common stock.

On December 15, 2014, we issued a press release announcing the entry into an exclusive Distribution Agreement, or Distribution Agreement, with Fresenius Medical Care Deutschland GmbH, or Fresenius, an operating division of Fresenius Medical Care AG & CO KGaA. Although the Distribution Agreement marks a continuation of our long-term distribution strategy, we do not deem it material to us at this time, but it may become material at some time

in the future. In accordance with the disclosure rules of the Securities and Exchange Commission, when such agreement becomes material to us, we shall appropriately disclose the terms and conditions of such agreement and file such agreement (with confidential treatment requested).

Under the terms of the Distribution Agreement, Fresenius was granted exclusive rights to distribute our CytoSorb product and other blood purification products, or the Products, for critical care medicine and intensive care unit applications in France, Poland, Sweden, Denmark, Norway, and Finland, or collectively, the

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Territory. Fresenius s exclusivity is subject to Fresenius achieving certain annual minimum guaranteed orders of the Products. If Fresenius does not achieve the annual minimum guaranteed orders, then we may terminate the Distribution Agreement or change the exclusive rights granted to non-exclusive rights. Fresenius is obligated to register the Products with the appropriate governmental agencies for marketing approval in the Territory within six (6) months. Pricing is generally fixed for the term of the Distribution Agreement, but Fresenius is able to achieve volume discounts on pricing. The parties agree to negotiate, in good faith, an increase in the purchase price of the Products in the event the average selling price to customers increases or, on the other hand, if the costs of production for the Products decreases, a reduction in the purchase price.

The Distribution Agreement expires upon the third anniversary of the first Product registration in the Territory, but, in any event, no later than June 15, 2018, and is subject to renewal or renegotiation with mutual agreement at that time. During the term of the Distribution Agreement and for a period of one (1) year afterwards, Fresenius has agreed not to compete with us regarding the production or distribution of a competitive product in the Territory.

Research and Development

We have been engaged in research and development since inception. Our research and development costs were approximately $1,739,000 and $2,532,000 for the years ended December 31, 2013 and 2012, respectively. From our inception date January 22, 1997, through to December 31, 2013 our research and development costs totaled approximately $55,668,000. We have recently been awarded more than $5 million in contracts from DARPA ($3.8M over 5 years), the U.S. Army ($100,000 Phase I SBIR; $50,000 Phase I extension, $1 million Phase II SBIR), and a $203,000 Phase I SBIR contract from the National Heart, Lung and Blood Institute to further develop our technologies for sepsis, trauma and burn injury, and blood transfusions, respectively. Payments are based on achieving certain technology milestones. In addition, the U.S. Air Force is funding a 30-patient, randomized controlled human pilot study evaluating CytoSorb® in patients with severe trauma and rhabdomyolysis. The FDA approved the trial under an IDE application and enrollment began in 2014.

Technology, Products and Applications

For approximately the past half-century, the field of blood purification has been focused on hemodialysis, a mature, well accepted medical technique primarily used to sustain the lives of patients with permanent or temporary loss of kidney function. It is widely understood by the medical community that dialysis has inherent limitations in that its ability to remove toxic substances from blood drops precipitously as the size of toxins increases. Our hemocompatible adsorbent technology is expected to address this shortcoming by removing toxins and toxic compounds largely untouched by dialysis technology.

Our polymer adsorbent technology can remove drugs, bioactive lipids, inflammatory mediators such as cytokines, free hemoglobin, toxins, and immunoglobulin from blood and physiologic fluids depending on the polymer construct. We believe that our technology may have many applications in the treatment of common, chronic and acute healthcare conditions including, but not limited to, the adjunctive treatment and/or prevention of sepsis; the treatment of other critical care illnesses such as severe burn injury, trauma, acute respiratory distress syndrome and pancreatitis; the prevention of post-operative complications of cardiopulmonary bypass surgery; the treatment of cancer cachexia; the prevention of damage to organs donated by brain-dead donors prior to organ harvest; the prevention of transfusion reactions caused by contaminants in transfused blood products; the prevention of contrast induced nephropathy, the treatment of drug overdose, and the treatment of chronic kidney failure. These applications vary by cause and complexity as well as by severity but share a common characteristic i.e., high concentrations of inflammatory mediators and toxins in the circulating blood.

CytoSorbents flagship product, CytoSorb® and other products under development, including BetaSorb™, ContrastSorb, and DrugSorb consist of a cartridge containing adsorbent polymer beads, although the polymers used in these devices are physically different. The cartridges incorporate industry standard connectors at either end of the device, which connect directly to the extracorporeal circuit (bloodlines) in series with a dialyzer, in the case of the BetaSorb™ device, or as a standalone device in the case of the CytoSorb®, ContrastSorb, and DrugSorb devices. The extra-corporeal circuit consists of plastic blood tubing, our blood filtration cartridges containing adsorbent polymer beads, pressure monitoring gauges, and a blood pump to maintain blood flow. The patient s blood is accessed through a catheter inserted into his or her veins. The catheter is connected to

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the extra-corporeal circuit and the blood pump draws blood from the patient, pumps it through the cartridge and returns it back to the patient in a closed loop system. All of these devices are expected to be compatible with standard blood pumps or hemodialysis machines used commonly in hospitals and will therefore not require hospitals to purchase additional expensive equipment, and will require minimal training.

The polymer beads designed for the HemoDefend™ platform are intended to be used in multiple configurations, including the common in-line filter between the blood bag and the patient, as well as a patent-pending Beads in a Bag configuration, where the beads are placed directly into a blood storage bag.

Markets

CytoSorbents is a critical care focused immunotherapy company. Immunotherapy is the ability to control the immune response to fight disease. Critical care medicine includes the treatment of patients with serious or life-threatening conditions who require comprehensive care in the intensive care unit (ICU), with highly-skilled physicians and nurses and advanced technologies to support critical organ function to keep patients alive. Examples of such conditions include severe sepsis and septic shock, severe burn injury, trauma, acute respiratory distress syndrome and severe acute pancreatitis. In the U.S., an estimated $82 billion or 0.7% of the U.S. gross domestic product (GDP) is spent annually on critical care medicine. In most larger hospitals, critical care treatment accounts for up to 20% of a hospital s overall budget and often results in financial losses for the hospital.

In many critical care illnesses, the mortality is often higher than 30%. A major cause of death is multiple organ failure, where vital organs such as the lungs, kidneys, heart and liver are damaged and no longer function properly. Such patients are kept alive with supportive care therapy, or life support , such as mechanical ventilation, dialysis and vasopressor treatment, that is designed to keep the patient from dying while using careful patient management to tip the balance towards gradual recovery over time. Unfortunately, most supportive care therapies only help to keep patients alive by supporting organ function but do not help reverse the underlying causes of organ failure and do not help patients recover more quickly. Because of this, the treatment course is often poorly defined and highly variable, leading to lengthy ICU stays, a higher risk of adverse outcomes from hospital acquired infections, medical errors, and other factors, as well as exorbitant costs. There is an urgent need for more effective active therapies that can help to reverse or prevent organ failure. CytoSorbents main product, CytoSorb® is a unique cytokine filter designed to try to address this void, by reducing cytokine storm and working to reduce the subsequent deadly inflammation that can lead to organ failure and death. Together the total addressable market to address these numerous critical care applications in the U.S. and E.U. with CytoSorb® is estimated at $10 15 billion.

Sepsis

Sepsis is characterized by a systemic inflammatory response triggered by a severe infection. It is commonly seen in the intensive care unit, accounting for approximately 10 20% of all ICU admissions. However, there are currently no approved products that are available to treat sepsis in the U.S. or E.U. Each year, there are more than one million and 1.5 million new cases of severe sepsis or septic shock in the United States and Europe, respectively. Based on the reported incidence of sepsis in a number of developed countries, the worldwide incidence is estimated to be 18 million cases per year. According to the U.S. Centers of Disease Control and Prevention (CDC), the incidence of serious infection and sepsis has doubled in the U.S. in the past 10 years. The main driver of sepsis incidence is the aging demographic, specifically patients who are older than age 65 who are more prone to infection and now account for two-thirds of patients hospitalized for sepsis and the majority of sepsis deaths. Other factors contributing to the increase in sepsis incidence include the spread of antibiotic resistant bacteria like methicillin-resistant Staphylococcus aureus (MRSA), an increase in co-morbid conditions like HIV, cancer and diabetes that increases the risk of infection,

an increasing use of implantable devices like artificial hips and knees that are prone to colonization by bacteria, and the appearance of new highly virulent or contagious strains of common pathogens such as H1N1 influenza.

There are generally three categories of sepsis, including mild to moderate sepsis, severe sepsis and septic shock. Mild to moderate sepsis typically occurs with an infection that is responsive to antibiotics or antiviral medication. An example is a patient with self-limiting influenza or a treatable community acquired pneumonia. Mortality is generally very low. Severe sepsis is sepsis with evidence of organ dysfunction. An example is a patient who develops respiratory failure due to a severe pneumonia and requires mechanical ventilation in the

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intensive care unit. Severe sepsis has a mortality rate of approximately 25 35%. Septic shock, or severe sepsis with low blood pressure that is not responsive to fluid resuscitation, is the most serious form of sepsis with an expected mortality in excess of 40 50%.

In sepsis, there are two major problems: the infection and the body s immune response to the infection. Antibiotics are main therapy used to treat the triggering infection, and although antibiotic resistance is growing, the infection is often eventually controlled. However, it is the body s immune response to this infection that frequently leads to the most devastating damage. The body s immune system normally produces large amounts of inflammatory mediators called cytokines to help stimulate and regulate the immune response during an infection. In severe infection, however, many people suffer from a massive, unregulated overproduction of cytokines, often termed cytokine storm that can kill cells and damage organs, leading to multiple organ dysfunction syndrome (MODS) and multiple organ failure (MOF), and in many cases death. Until recently, there have been no available therapies in the U.S. or E.U. that can control the aberrant immune response and cytokine storm. Our CytoSorb® device is a first-in-class, clinically-proven broad-spectrum extracorporeal cytokine filter currently approved for sale in the E.U. The goal of CytoSorb® is to prevent or treat organ failure by reducing cytokine storm and controlling a run-away immune response, while antibiotics work to control the actual infection. CytoSorb® has been evaluated in the randomized, controlled European Sepsis Trial in 43 patients in Germany with predominantly septic shock and acute respiratory distress syndrome or acute lung injury. The therapy was safe in more than 300 human treatments and generally well tolerated. CytoSorb® demonstrated the statistically significant ability to reduce cytokine storm and key cytokines by 30 50%. In a post-hoc analysis, this was associated with improvements in clinical outcome in two high-risk patient populations those with very high cytokine levels and patients 65 years of age and older. CytoSorbents is currently conducting a Dosing study at 8 clinical trial sites in Germany, and has demonstrated the safety of continuous treatment over 7 days.

We estimate that the market potential in Europe for its products is larger than that in the U.S. For example, in the U.S. and Europe, there are an estimated one million and 1.5 million new cases, respectively, of severe sepsis and septic shock annually. In Germany alone, according to the German Sepsis Society (GSS), there are approximately 154,000 cases of severe sepsis each year. Patients are treated in the intensive care unit for 12 18 days on average and for a total of 20 25 days in the hospital. Germany is the largest medical device market in Europe and the third largest in the world.

The only treatment that had been approved to treat sepsis in the U.S. or E.U. was Xigris (Eli Lilly). Because of concerns of cost, limited efficacy, and potentially dangerous side effects including the increased risk of fatal bleeding events such as intracranial bleeding for those at risk, and also because of problems with reimbursement, worldwide sales of Xigris decreased from $160M in 2009 to $104M in 2010. In October 2011, following its PROWESS SHOCK trial that demonstrated no benefit in mortality in septic shock patients, Lilly voluntarily withdrew Xigris from all markets worldwide, and is no longer available as a treatment.

Development of most other experimental therapies has been discontinued, including Eritoran from Eisai, CytoFab from BTG/Astra Zeneca, Talactoferrin from Agennix, and others. Currently, there are two late stage trials ongoing. In November 2012, an 800 patient Phase III randomized controlled study began for Recomodulin (ART 123, Artisan/Asahi Kasei), a recombinant human thrombomodulin, for the treatment of septic patients with coagulopathy. In mid-2013, following an interim analysis of safety data, the Data Safety Monitoring Board (DSMB) recommended that the trial continue. The primary completion date of the trial is expected to be March 2015. Recomodulin has been approved in Japan since 2009 for the treatment of disseminated intravascular coagulation (DIC), a late complication of sepsis, at a cost of $5,800 per treatment. Although it has other activity, it works primarily by a similar anticoagulant mechanism to Xigris. Because of this, it has only demonstrated a limited mortality benefit (~9%: 34.6% control vs 26% treatment), similar to that seen in Xigris initial PROWESS Trial (~6%: 31% control vs 25% treatment) and is unlikely to have greater benefit in larger scale studies.

Spectral Diagnostics is collaborating with Toray on the EUPHRATES trial, combining an endotoxin assay with extracorporeal endotoxin removal by Toraymyxin, a polymyxin-B immobilized polystyrene fiber cartridge. The study began in June 2010 and is still enrolling patients. Endotoxemia is a result of Gram negative sepsis,

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which only accounts for 45% of cases of sepsis. It is a potent stimulator of cytokine storm. However, all anti-endotoxin strategies have failed pivotal studies to date, believed to be the result of intervening too late in the sepsis cascade. In a second interim analysis announced in January 2014, following the enrollment of 184 patients with 28-day follow-up, the DSMB has recommended that the trial continue, but has asked that further analysis be performed before recalculation of the trial s sample size is finalized. Because of the lack of available therapies, there remains a significant medical need for improved treatments for sepsis.

Severe sepsis and septic shock patients are amongst the most expensive patients to treat in a hospital. Because of this, we believe that cost savings to hospitals and/or clinical efficacy, rather than the cost of treatment itself, will be the determining factor in the adoption of CytoSorb® in the treatment of sepsis. CytoSorb® is approved in the E.U. and is being sold directly in Germany, Austria, and Switzerland. CytoSorbents has ongoing discussions with potential corporate partners and independent distributors to market CytoSorb in other select E.U. countries and in other countries outside the E.U. that accept CE Mark approval. CytoSorb® is currently reimbursed in Germany and Austria at more than $500 per unit. A seven day treatment costs ~$3,500, approximately the cost of 1 2 days in the ICU. The cost of therapy represents a fraction of what is currently spent on the treatment of patients with sepsis. For example, a typical severe sepsis or septic shock patient in the U.S. costs approximately $45,000 60,000 to treat. Based upon this price point, the total addressable market for CytoSorb® for the treatment of sepsis in the U.S. and E.U. is approximately $6 8 billion.

Cardiac Surgery

There are approximately 500,000 cardiopulmonary bypass (CPB) and cardiac surgery procedures performed annually in the U.S., 500,000 in the E.U., and approximately 1.5 million procedures worldwide. These include relatively common procedures including coronary artery bypass graft surgery, valve replacement surgery, heart and lung transplant, congenital heart defect repair, and left ventricular assist device implantation for the treatment of heart failure. Cardiac surgery can result in inflammation and the production of high levels of inflammatory cytokines, as well as hemolysis, causing the release of free hemoglobin. These can lead to post-operative complications including infection, pulmonary, renal, and neurological dysfunction. Complications lead to longer ICU recovery times and hospital stays, increased morbidity and mortality, and higher costs. An average coronary artery bypass graft procedure already costs approximately $36,000 in the U.S. without complications. The use of CytoSorb® to reduce cytokines and other inflammatory mediators during and after the surgical procedure may prevent or mitigate these post-operative complications. During the procedure, the CytoSorb® filter can be incorporated in a bypass circuit in the heart-lung machine without the need for a separate pump, a unique competitive advantage over other technologies. After the surgery, CytoSorb® can be used similarly to dialysis on patients that develop a severe post-operative inflammatory response. Direct cytokine and hemoglobin removal with CytoSorb® enables it to replace the existing market for leukoreduction filters in cardiac surgery that attempt to indirectly reduce cytokines by capturing cytokine-producing leukocytes an inefficient and suboptimal approach. The peri-procedural total addressable market for CytoSorb® in the U.S. and E.U in cardiothoracic surgery procedures is estimated to be $500 million to $1 billion.

Acute Respiratory Distress Syndrome

Acute lung injury (ALI) and acute respiratory distress syndrome (ARDS) are two of the most serious conditions on the continuum of respiratory failure when both lungs are compromised by inflammation and fluid infiltration, severely compromising the lung s ability to both oxygenate the blood and rid the blood of carbon dioxide produced by the body. There are an estimated 165,000 cases of acute respiratory distress syndrome in the U.S. each year, with more cases in the E.U. Patients with ALI and ARDS typically require mechanical ventilation, and sometimes extracorporeal membrane oxygenation therapy, to help achieve adequate oxygenation of the blood. Patients on mechanical ventilation are at high risk of ongoing ventilator-induced lung injury, oxygen toxicity, ventilator-acquired

pneumonias, and other hospital acquired infections, and outcome is significantly dependent on the presence of other organ dysfunction as well as co-morbid conditions such as pre-existing lung disease (e.g., emphysema or chronic obstructive pulmonary disease) and age. Because of this, mortality is typically greater than 30%, even with modern medicine and ventilation techniques. ALI and ARDS can be precipitated by a number of conditions including pneumonia and other infections, burn and smoke inhalation injury, aspiration, reperfusion injury and shock. Cytokine

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injury plays a major role in the vascular compromise and cell-mediated damage to the lung. Reduction of cytokine levels may either prevent or mitigate lung injury, enabling patients to wean from mechanical ventilation faster, potentially reducing numerous sequelae such as infection, pneumothoraces, and respiratory muscle deconditioning, and allow faster intensive care unit discharge, thereby potentially saving costs. CytoSorb® treatment of patients with either ALI or ARDS in the setting of sepsis was the subject of our European Sepsis Trial where in a post-hoc analysis in patients with very high cytokine levels, we observed faster ventilator weaning in CytoSorb® treated patients that showed a statistical trend to benefit. Future, prospectively defined, larger studies are required to confirm these findings. Although a number of therapies have been tried such as corticosteroids, nitric oxide, surfactant therapy, and others, there are currently no approved treatments for ARDS. Only low tidal volume ventilation has been demonstrated to improve mortality (31.0 vs 39.8% control) in this patient population. However, even with this intervention, mortality is still unacceptably high. The total addressable market for CytoSorb® to treat ARDS/ALI in the E.U. is estimated to be between $500 million to $1.25 billion, and $1 2 billion in the U.S. and E.U.

Severe Burn Injury

In the U.S., there are approximately 2.4 million burn injuries per year, with 650,000 treated by medical professionals and approximately 75,000 requiring hospitalization. Aggressive modern management of burn injury, including debridement, skin grafts, anti-microbial dressings and mechanical ventilation for smoke and chemical inhalation injury has led to significant improvements in survival of burn injury to approximately 95% on average in leading burns centers. However, there remains a need for better therapies to reduce the mortality in those patients with large burns and inhalation injury as well as to reduce complications of burn injury and hospital length of stay for all patients. According to National Burn Repository Data, the average hospital stay for burn patients is directly correlated with the percent total body surface area (TBSA) burned. Every 1% increase of TBSA burned equates to approximately 1 additional day in the hospital. A single patient with more than 30% TBSA burned who survives, is hospitalized for an average of 30 days and costs approximately $200,000 to treat. Major causes of death following severe burn and smoke inhalation injury are multi-organ failure (hemodynamic shock, respiratory failure, acute renal failure) and sepsis, particularly in patients with greater than 30% TBSA burns. Specifically, burns and inhalation injury lead to severe systemic and localized lung inflammation, loss of fluid, and cytokine overproduction. This cytokine storm causes numerous problems, including: hypovolemic shock and inadequate oxygen and blood flow to critical organs, acute respiratory distress syndrome preventing adequate oxygenation of blood, capillary leakage resulting in tissue edema and intravascular depletion, hypermetabolism leading to massive protein degradation and catabolism and yielding increased risk of infection, impaired healing, severe weakness and delayed recovery, immune dysfunction causing a higher risk of secondary infections (wound infections, pneumonia) and sepsis, and direct apoptosis and cell-mediated killing of cells, leading to organ damage. Up to a third of severe hospitalized burn patients develop multi-organ failure and sepsis that can often lead to complicated, extended hospital courses, or death. Broad reduction of cytokine storm has not been previously feasible and represents a novel approach to limiting or reversing organ failure, potentially enabling more rapid mechanical ventilation weaning, prevention of shock, reversal of the hypermetabolic state encouraging faster healing and patient recovery, reducing hospital costs, and potentially improving survival. The total addressable market in the E.U. for CytoSorb to address burn and smoke inhalation injury is estimated at $150 350 million and $300 600 million in the U.S and E.U.

Trauma

According to the National Center for Health Statistics, in the U.S., there are more than 31 million visits to hospital emergency rooms, with 1.9 million hospitalizations, and 167,000 deaths every year due to injury. The leading causes of injury are trauma from motor vehicle accidents, being struck by an object or other person, and falls. Trauma is a well-known trigger of the immune response and a surge of cytokine production or cytokine storm. In trauma, cytokine storm contributes to a systemic inflammatory response syndrome (SIRS) and a cascade of events that cause cell death,

organ damage, organ failure and often death. Cytokine storm exacerbates physical trauma in many ways. For instance, trauma can cause hypovolemic shock due to blood loss, while cytokine storm causes capillary leak and intravascular volume loss, and triggers nitric oxide production that causes cardiac depression and peripheral dilation. Shock can lead to a lack of oxygenated blood flow to vital organs, causing organ injury. Severe systemic inflammation and cytokine storm can lead to

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acute lung injury and acute respiratory distress syndrome as is often seen in ischemia and reperfusion injury following severe bleeding injuries. Penetrating wound injury from bullets, shrapnel and knives, can lead to infection and sepsis, another significant cause of organ failure in trauma. Complicating matters is the breakdown of damaged skeletal muscle, or rhabdomyolysis, from blunt trauma that can lead to a massive release of myoglobin into the blood that can crystallize in the kidneys, leading to acute kidney injury and renal failure. Renal failure in trauma is associated with a significant increase in expected mortality. Cytokine and myoglobin reduction by CytoSorb® and related technologies may have benefit in trauma, potentially improving clinical outcome. In December 2011 and September 2012, CytoSorbents was awarded a Phase I and a Phase II SBIR award, respectively, from the U.S. Army Medical Research and Materiel Command to develop its technology for the treatment of trauma and burn injury. The total addressable market for CytoSorb® for the treatment of trauma is estimated to be $1.5 2.0 billion in the U.S. and E.U.

Severe Acute Pancreatitis

Acute pancreatitis is the inflammation of the pancreas that results in the local release of digestive enzymes and chemicals that cause severe inflammation, necrosis and hemorrhage of the pancreas and local tissues. Approximately 210,000 people in the U.S. are hospitalized each year with acute pancreatitis with roughly 20% requiring ICU care. It is caused most frequently by a blockage of the pancreatic duct or biliary duct with gallstones, cancer, or from excessive alcohol use. Severe acute pancreatitis is characterized by severe pain, inflammation, and edema in the abdominal cavity, as well as progressive systemic inflammation, generalized edema, and multiple organ failure that is correlated with high levels of cytokines and digestive enzymes in the blood. Little can be done to treat severe acute pancreatitis today, except for pancreatic duct decompression with endoscopic techniques, supportive care therapy, pain control, enteral feeding, and fluid support. ICU stay is frequently measured in weeks and although overall ICU mortality is approximately 10%, patients with multiple organ failure have a much higher risk of death. CytoSorb® may potentially benefit overall outcomes in episodes of acute pancreatitis by removing a diverse set of toxins from blood. The total addressable market for CytoSorb® for the treatment of severe acute pancreatitis in the U.S. and E.U. is estimated to be between $400 600 million.

Cancer Cachexia and Cancer Immunotherapy

Cancer cachexia is a progressive wasting syndrome characterized by rapid weight loss, anorexia, and physical debilitation that significantly contributes to death in the majority of cancer patients. Cancer cachexia is a systemic inflammatory condition, driven by excessive pro-inflammatory cytokines and other factors, that cripples the patient s physical and immunologic reserve to fight cancer. Despite afflicting millions of patients worldwide each year, there are no effective approved treatments for cancer cachexia, with only symptomatic treatments available. CytoSorb® blood purification may stop or reverse cancer cachexia through broad reduction of cytokines and other inflammatory mediators. For example, CytoSorb® efficiently removes TNF-alpha (originally called cachectin or cachexin when first isolated in cancer cachexia patients) and other major pro-inflammatory cytokines including IL-1, IL-6, and gamma interferon that can cause cachexia. This broad immunotherapy approach may lead to improved clinical outcomes while reducing patient suffering.

In February 2014, CytoSorbents announced a research collaboration with researchers at the University of Pennsylvania School of Veterinary Medicine to evaluate the use of CytoSorb® as a treatment for cancer cachexia in animals. Demonstrating the potential benefit of CytoSorb® therapy in animals may provide the data to begin evaluating the therapy in human cancer patients in the U.S. and Europe. CytoSorb® is approved in the European Union with a broad indication for use, allowing it to be used in any clinical situation where cytokines are elevated, including the potential treatment today of cancer related issues such as cancer cachexia. Because of this, any positive data from this collaboration could potentially be translated to human studies relatively quickly.

The collaboration will also explore the use of CytoSorb® as a primary immunotherapy to treat cancer, or in synergy with more traditional chemotherapy or immunotherapy agents. Cancer cells have evolved ways to proliferate while confusing and evading the immune response. Many of these mechanisms rely on immunologic messages relayed by cytokines and other soluble factors that CytoSorb® has the potential to remove. In doing so, CytoSorb® may help to restore the ability of the immune system to attack cancer cells.

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The total addressable market for CytoSorb for the treatment of cancer cachexia and cancer in the U.S. and E.U. is estimated to be in excess of $3 billion.

Brain-Dead Organ Donors

There are in excess of 6,000 brain dead organ donors each year in the United States; worldwide, the number of these organ donors is estimated to be at least double the U.S. brain dead organ donor population. There is a severe shortage of donor organs. Currently, there are more than 100,000 individuals on transplant waiting lists in the United States. Cytokine storm is common in these organ donors, resulting in reduced viability of potential donor organs. The potential use of CytoSorb® hemoperfusion to control cytokine storm in brain dead organ donors could increase the number of viable organs harvested from the donor pool and improve the survival of transplanted organs. A proof-of-concept pilot study using our technology in human brain dead donors has been published. In addition, CytoSorb® treatment in a porcine animal model of brain death demonstrated a reduction in cytokines as well as a preservation of cardiac function compared to untreated controls.

Blood Transfusions

The HemoDefend™ platform is designed to be a practical, low cost, and effective way to safeguard the quality and safety of the blood supply. In the United States alone, 15 million packed red blood cell (pRBC) transfusions and another 15 million transfusions of other blood products (e.g. platelet, plasma, and cryoprecipitate) are administered each year with an average of 10% of all US hospital admissions requiring a blood transfusion. The sheer volume of transfusions, not just in the US, but worldwide, complicates an already difficult task of maintaining a safe and reliable blood supply. Trauma, invasive operative procedures, critical care illnesses, supportive care in cancer, military usage, and inherited blood disorders are just some of the drivers of the use of transfused blood. In war, hemorrhage from trauma is a leading cause of preventable death, accounting for an estimated 30 40% of all fatalities. For example, in Operation Iraqi Freedom, due to a high rate of penetrating wound injuries, up to 8% of admissions required massive transfusions, defined as 10 units of blood or more in the first 24 hours. There is a clear need for a stable and safe source of blood products. However, blood shortages are common and exacerbated by the finite lifespan of blood. According to the Red Cross, packed red blood cell (pRBC) units have a refrigerated life span of 42 days. However, many medical experts believe there is an increased risk of infection and transfusion reactions once stored blood ages beyond two weeks. Transfusion-related acute lung injury (TRALI) is the leading cause of non-hemolytic transfusion-related morbidity and mortality, with an incidence of 1 in 2,000 5,000 transfusions and a mortality rate of up to 10%. Fatal cases of TRALI have been most closely related to anti-HLA or anti-granulocyte antibodies found in a donor s transfused blood. Other early transfusion reactions such as transfusion-associated dyspnea, fever and allergic reactions occur in 3 5% of all transfusions and can vary in severity depending on the patient s condition. These are caused by cytokines, bioactive lipids, free hemoglobin, toxins, foreign antigens, certain drugs, and a number of other inflammatory mediators that accumulate in transfused blood products during storage. Leukoreduction can remove the majority of white cells that can produce new cytokines but cannot eliminate those cytokines already in blood, and cannot otherwise remove other causative agents such as free hemoglobin and antibodies. Automated washing of pRBC is effective but is impractical due to the time, cost, and logistics of washing each unit of blood. The HemoDefend™ platform is a potentially superior alternative to purify blood transfusion products to these methods. The total addressable market for HemoDefend™ is more than $500 million for pRBCs alone.

Radiocontrast Removal

ContrastSorb is a development-stage blood purification technology that is being optimized for the removal of IV contrast from blood in order to prevent contrast-induced nephropathy (CIN). Contrast-induced nephropathy is the acute loss of renal function within the first 48 hours following IV contrast administration. IV contrast is widely

administered to patients undergoing CT scans, to enhance the images and make it easier to identify anatomic structures. IV contrast is also administered during vascular interventional radiology procedures and angiography of blood vessels in the brain, heart, limbs, and other parts of the body to diagnose and treat atherosclerosis (narrowing of blood vessels due to cholesterol deposits), vascular injury, aneurysms, etc. For example, an estimated 10 million coronary angiograms are performed worldwide each year to diagnose and treat coronary artery disease by placing coronary stents, performing balloon angioplasty, or atherectomy

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(removal of plaque in arteries). Overall, there are an estimated 80 million doses of IV contrast administered worldwide each year, split between approximately 65 million contrast-enhanced CT scans, 10 million coronary angiograms, and 5 million conventional angiograms. There are an estimated 30 million doses administered each year in the U.S. alone. The reported risk of CIN in patients undergoing contrast enhanced CT scans has been reported to be 2 13%. For coronary intervention, the risk has been estimated to be as high as 20 30% in high risk patients with pre-existing renal insufficiency, long-term diabetes, hypertension, congestive heart failure, and older age. The use of low osmolar IV contrast, hydration of patients pre-procedure, orally administration of N-acetylcysteine, and other agents to prevent CIN have demonstrated modest benefit in some clinical studies, but in many cases, the results across studies have been equivocal and inconsistent. In high risk patients, the direct removal of IV contrast from the blood with ContrastSorb to prevent CIN represents a potentially more effective alternative. The worldwide market opportunity for ContrastSorb in this high risk group is approximately $1 2 billion.

DrugSorb

DrugSorb is a development-stage blood purification technology that is capable of removing a wide variety of drugs and chemicals from blood, as a potential treatment for drug overdose, drug toxicity, toxic chemical exposure, use in high-dose regional chemotherapy, and other applications. It has demonstrated extremely high single pass removal efficiency of a number of different drugs that exceeds the extraction capability of hemodialysis or other filtration technologies. It is similar in action to activated charcoal hemoperfusion cartridges that have been available for many years, but has the advantage of having inherent biocompatibility and hemocompatibility without coatings, and can be easily customized for specific agents.

Chronic Kidney Failure

The National Kidney Foundation estimates that more than 20 million Americans have chronic kidney disease. Left untreated, chronic kidney disease can ultimately lead to chronic kidney failure, which requires a kidney transplant or chronic dialysis (generally three times per week) to sustain life. There are more than 340,000 patients in the United States currently receiving chronic dialysis and more than 1.5 million worldwide. Approximately 66% of patients with chronic kidney disease are treated with hemodialysis. One of the problems with standard high-flux dialysis is the limited ability to remove certain mid-molecular weight toxins such as b2-microglobulin. Over time, b2-microglobulin can accumulate and cause amyloidosis in joints and elsewhere in the musculoskeletal system, leading to pain and disability. Our BetaSorb™ device has been designed to remove these mid-molecular weight toxins when used in conjunction with standard dialysis. Standard dialysis care typically involves three sessions per week, averaging approximately 150 sessions per year.

Products

The polymer adsorbent technology used in our products can remove middle molecular weight toxins, such as cytokines, from blood and physiologic fluids. All of the potential applications described below (i.e., the adjunctive treatment and/or prevention of sepsis; the adjunctive treatment and/or prevention of other critical care conditions such as acute respiratory distress syndrome, burn injury, trauma and pancreatitis; the prevention of damage to organs donated by brain-dead donors prior to organ harvest; the prevention of post-operative complications of cardiopulmonary bypass surgery; the prevention of kidney injury from IV contrast; and the treatment of chronic kidney failure) share in common high concentrations of toxins in the circulating blood. However, because of the limited studies we have conducted to date, we are subject to substantial risk that our technology will have little or no effect on the treatment of any of these indications. In 2011 we completed our European Sepsis Trial of our CytoSorb® device. The study was a randomized, open label, controlled clinical study in fourteen (14) sites in Germany of one

hundred (100) critically ill patients with predominantly septic shock and respiratory failure. The trial successfully demonstrated CytoSorb® s ability to reduce circulating levels of key cytokines from whole blood by 30 50% in treated patients, and that treatment was safe in these critically-ill patients with multiple organ failure. We completed the CytoSorb® technical file review with our Notified Body and CytoSorb® subsequently received European Union regulatory approval under the CE Mark as an extracorporeal cytokine filter indicated for use in any clinical situation where cytokines are elevated. Given sufficient and timely financial resources, we intend to continue to

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commercialize in Europe and conduct additional clinical studies of our products. However, there can be no assurance that we will ever obtain regulatory approval for any other device, or that the CytoSorb® device will be able to generate significant sales.

The CytoSorb® Device (Critical Care)

APPLICATION: Adjunctive Therapy in the Treatment of Sepsis.

Sepsis is a potentially life threatening disease defined as a systemic inflammatory response in the presence of a known or suspected infection. Sepsis is mediated by high levels of toxic compounds (cytokines), which are released into the blood stream as part of the body s auto-immune response to severe infection or injury. These toxins cause severe inflammation and damage healthy tissues, which can lead to organ dysfunction and failure. Sepsis is very expensive to treat and has a high mortality rate.

Potential Benefits: To the extent our adsorbent blood purification technology is able to prevent or reduce the accumulation of cytokines in the circulating blood, we believe our products may be able to prevent or mitigate severe inflammation, organ dysfunction and failure in sepsis patients. Therapeutic goals as an adjunctive therapy include reduced ICU and total hospitalization time.

Background and Rationale: We believe that the effective treatment of sepsis is the most valuable potential application for our technology. Severe sepsis (sepsis with organ dysfunction) and septic shock (severe sepsis with persistent hypotension despite fluid resuscitation) carries mortality rates of between 28% and 80%. Death can occur within hours or days, depending on many variables, including cause, severity, patient age and co-morbidities. Researchers estimate that there are approximately one million new cases of sepsis in the U.S. each year; and based on the reported incidence in a number of developed countries, the worldwide incidence is estimated to be 18 million cases annually. The incidence of sepsis is also rising due to:

1) An aging population
2) Increased incidence of antibiotic resistance
3) Increase in co-morbid conditions like cancer and diabetes
4) Increased use of indwelling medical devices that are susceptible to infection

In the U.S. alone, treatment of sepsis costs nearly $18 billion annually. According to the Centers for Disease Control, sepsis is a top ten cause of death in the U.S. The incidence of sepsis is believed to be under-reported as the primary infection (i.e., pneumonia, pyelonephritis, etc.) is often cited as the cause of death.

An effective treatment for sepsis has been elusive. Pharmaceutical companies have been trying to develop drug therapies to treat the condition. With the exception of a single biologic, Xigris® from Eli Lilly, to our knowledge, no other products have been approved in either the U.S. or Europe for the treatment of sepsis.

Many medical professionals believe that blood purification for the treatment of sepsis holds tremendous promise. Studies using dialysis and hemofiltration technology have been encouraging, but have only had limited benefit to sepsis patients. The reason for this appears to be rooted in a primary limitation of dialysis technology itself: the inability of standard dialysis to effectively and efficiently remove significant quantities of larger toxins such as cytokines from circulating blood. CytoSorb® has demonstrated the ability to safely reduce key cytokines by 30 50% in septic patients with multiple-organ failure in our European Sepsis Trial.

CytoSorb® s ability to interact safely with blood (hemocompatibility) has been demonstrated through ISO 10993 testing, which includes testing for hemocompatibility, biocompatibility, cytotoxicity, genotoxicity, acute sensitivity

and complement activation. Safety data collected from more than 300 treatments in septic patients, where there have been no serious device related adverse events, provide additional evidence that CytoSorb® treatment is safe in this patient population.

CytoSorb® has been designed to achieve broad-spectrum removal of both pro- and anti-inflammatory cytokines, preventing or reducing the accumulation of high concentrations in the bloodstream. This approach is intended to modulate the immune response without causing damage to the immune system. For this reason, researchers have referred to the approach reflected in our technology as immunomodulatory therapy.

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Projected Timeline: In 2011, the CytoSorb® filter received European Union regulatory approval under the CE Mark as an extracorporeal cytokine filter to be used in clinical situations where cytokines are elevated. CytoSorbents manufacturing facility has also achieved ISO 13485:2003 Full Quality Systems certification, an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in the European Union. We are currently manufacturing our CytoSorb® device for commercial sale in the European Union. CytoSorbents is currently selling CytoSorb® in Germany, Austria, and Switzerland with a direct sales force. Based on its CE Mark approval, CytoSorb® can also be sold throughout all 28 countries of the European Union and countries outside the E.U. that will accept European regulatory approval. With sufficient resources and continued positive clinical data, assuming availability of adequate and timely funding, and continued positive results from our clinical studies, we intend to continue its commercialization plans of its product in Europe as well as pursue U.S. clinical trials to seek FDA regulatory approval for CytoSorb® in the United States.

APPLICATION: Adjunctive Therapy in Other Critical Care Applications.

Potential Benefits: Cytokine-mediated organ damage and immune suppression can increase the risk of death and infection in patients with commonly seen critical care illnesses such as acute respiratory distress syndrome, severe burn injury, trauma and pancreatitis. If CytoSorb® is useful as a cytokine filter and as an immunomodulator, cytokine reduction, both pro-inflammatory and anti-inflammatory, has the potential to:

prevent or mitigate Multiple Organ Dysfunction Syndrome (MODS) and/or Multiple Organ Failure (MOF)
prevent or reduce secondary infections
reduce the need for expensive life-sparing supportive care therapies such as mechanical ventilation
reduce the need for ICU care, freeing expensive critical care resources, and reducing hospital costs and costs to the healthcare system

Background and Rationale: A shared feature of many life-threatening conditions seen in the ICU is severe inflammation (either sepsis or systemic inflammatory response syndrome) due to an over-reactive immune system and high levels of cytokines that can cause or contribute to organ dysfunction, organ failure and patient death. Examples of such conditions include severe burn injury, trauma, acute respiratory distress syndrome and severe acute pancreatitis. MODS and MOF are common causes of death in these illnesses and mortality is directly correlated with the number of organs involved. There are currently few active therapies to prevent or treat MODS or MOF. If CytoSorb® can reduce direct or indirect cytokine injury of organs, it may mitigate MODS or MOF, improve overall patient outcome and reduce costs of treatment. In addition, secondary infection, such as ventilator-acquired pneumonia, urinary tract infections, or catheter-related line infections, are another major cause of morbidity and mortality in all patients treated in the ICU. Prolonged illness, malnutrition, age, multiple interventional procedures, and exposure to antibiotic resistant pathogens are just some of the many risk factors for functional immune suppression and infection. In sepsis and SIRS, the overexpression of pro-inflammatory cytokines can also cause a depletion of immune effector cells through apoptosis and other means, and anti-inflammatory cytokines can cause profound immune suppression, both major risk factors for infection.

Projected Timeline: CytoSorb s E.U. CE Mark approval as an extracorporeal cytokine filter and its broad approved indication to be used in any clinical situation where cytokines are elevated, allows it to be used on label in critical care applications such as acute respiratory distress syndrome, severe burn injury, trauma, liver failure, and pancreatitis, and in other conditions where cytokine storm, sepsis and/or systemic inflammatory response syndrome (SIRS) plays a prominent role in disease pathology. Our goal is to stimulate investigator-initiated clinical studies with our device for these applications. Currently, we have more than 40 investigator initiated studies being planned in Germany, Austria, and the United Kingdom, many of which are currently enrolling patients. We have been moving forward in parallel with a program to further understand the potential benefit of CytoSorb® hemoperfusion in these conditions through

additional investigational animal studies and potential human pilot studies in the U.S. funded either directly by us, through grants, or through third-parties. We have previously noted that the U.S. Air Force is funding a

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30-patient randomized controlled trial in human trauma patients with rhabdomyolysis that has been approved to start by the FDA under an IDE (investigational device exemption) approval. Commencement of these and other formal studies is contingent upon adequate funding and, in the case of U.S. human studies, FDA investigational device exemption (IDE) approval of the respective human trial protocols.

APPLICATION: Prevention and treatment of post-operative complications of cardiopulmonary bypass surgery.

Potential Benefits: If CytoSorb® is able to prevent or reduce high-levels of cytokines from accumulating in the blood system during and following cardiac surgery, we anticipate that post-operative complications of cardiopulmonary bypass surgery may be able to be prevented or mitigated. The primary goals for this application are to:

reduce ventilator and oxygen therapy requirements;
reduce post-operative complications such as ARDS, acute kidney injury, post-perfusion syndrome;
reduce length of stay in hospital intensive care units; and
reduce the total cost of patient care.

Background and Rationale: Due to the highly invasive nature of cardiopulmonary bypass surgery, high levels of cytokines are produced by the body, triggering severe inflammation. In addition, hemolysis of red blood cells frequently occurs, resulting in the release of free hemoglobin into the bloodstream. These inflammatory mediators can lead to post-operative complications. CytoSorb® is the only cytokine reduction technology approved in the E.U. that can be used intraoperatively in a bypass circuit in a heart-lung machine without the need for another machine. If our products are able to prevent or reduce the accumulation of cytokines or free hemoglobin in a patient s blood stream, we may be able to prevent or mitigate post-operative complications caused by an excessive or protracted inflammatory response to the surgery. Intra-operative use of CytoSorb® on high risk cardiac surgery patients, where the risk of post-operative complications is the highest, is expected to be the main initial target market. The use of CytoSorb® in the post-operative period to treat post-operative SIRS is another application of the technology.

Projected Timeline: We commissioned the University of Pittsburgh to conduct a study to characterize the production of cytokines as a function of the surgical timeline for cardiopulmonary bypass surgery. An observational study of 32 patients was completed, and information was obtained with respect to the onset and duration of cytokine release. Cardiac surgeons and cardiac perfusionists in Germany and Austria have now used CytoSorb® successfully intra-operatively and post-operatively on cardiac surgery patients. This application is also the subject of more than 8 investigator-initiated studies in Germany and Austria. With sufficient resources, we plan to conduct additional clinical studies in cardiac surgery patients in the near future.

APPLICATION: Prevention and treatment of organ dysfunction in brain-dead organ donors to increase the number and quality of viable organs harvested from donors.

Potential Benefits: If CytoSorb® is able to prevent or reduce high-levels of cytokines from accumulating in the bloodstream of brain-dead organ donors, we believe CytoSorb® may be able to mitigate organ dysfunction and failure, which results from severe inflammation following brain-death. The primary goals for this application are:

improving the viability of organs which can be harvested from brain-dead organ donors, and
increasing the likelihood of organ survival following transplant.

Background and Rationale: When brain death occurs, the body responds by generating large quantities of inflammatory cytokines. This process is similar to systemic inflammatory response syndrome and sepsis. A high percentage of donated organs are never transplanted due to this response, which damages healthy organs and prevents transplant. In addition, inflammation in the donor may damage organs that are harvested and

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reduce the probability of graft survival following transplant. CytoSorb® treatment in a porcine animal model of brain death demonstrated a reduction in cytokines as well as a preservation of cardiac function compared to untreated controls.

There is a shortage of donated organs worldwide, with approximately 100,000 people currently on the waiting list for organ transplants in the United States alone. Because there are an insufficient number of organs donated to satisfy demand, it is vital to maximize the number of viable organs donated, and optimize the probability of organ survival following transplant.

Projected Timeline: Studies have been conducted under a $1 million grant from the Health Resources and Services Administration (HRSA), an agency of the U.S. Department of Health and Human Services. Researchers at the University of Pittsburgh Medical Center and the University of Texas, Houston Medical Center have completed the observational and dosing phases of the project. The results were published in Critical Care Medicine, January 2008. The next phase of this study, the treatment phase, would involve viable donors treated with the CytoSorb® device. In this phase of the project, viable donors will be treated and the survival and function of organs in transplant recipients will be tracked and measured. The treatment phase would be contingent upon further discussion with the FDA and HRSA regarding study design, as well as obtaining additional funding.

The HemoDefend Blood Purification Technology Platform (Acute and Critical Care)

APPLICATION: Reduction of contaminants in the blood supply that can cause transfusion reactions or disease when administering blood and blood products to patients.

Potential Benefits: The HemoDefend blood purification technology platform is designed to reduce contaminants in the blood supply that can cause transfusion reactions or disease. It is a development stage technology that is not yet approved in any markets, but is comprised of CytoSorbents highly advanced, biocompatible, polymer bead technology. If this technology is successfully developed and then incorporated into a regulatory approved product, it could have a number of important benefits.

reduce the risk of transfusion reactions and improve patient outcome
improve the quality, or extend the shelf life of stored blood products
improve the availability of blood and reduce blood shortages by reducing the limitations of donors to donate blood
allow easier processing of blood

Background and Rationale: The HemoDefend technology platform was built upon our successes in designing and manufacturing porous polymer beads that can remove cytokines. We have expanded the technology to be able to remove substances as small as drugs and bioactive lipids, to proteins as large as antibodies from blood that can cause transfusion reactions and disease. Although the frequency of these reactions are relatively low (~3 5%), the sheer number of blood transfusions is so large, that the number of transfusion reactions, ranging from mild to life-threatening, is substantial, ranging from several hundreds of thousands to more than a million reactions each year in the U.S. alone. In critically-ill patients the risk of transfusion reactions is significantly higher than in the general population and can increase the risk of death because their underlying illnesses have depleted protective mechanisms and have primed their bodies to respond more vigorously to transfusion-associated insults.

A number of retrospective studies have also suggested that administration of older blood leads to increased adverse events and even increased mortality, compared with blood recently harvested. Biological studies have demonstrated the accumulation of erythrocyte storage lesions that compromise the function and structural integrity of packed red blood cells and have also demonstrated the accumulation of substances during blood storage that can lead to transfusion reactions. There are currently two complete and one ongoing adult, prospective, randomized, controlled

studies, RECESS, ABLE, and TRANSFUSE looking at morbidity and mortality in cardiovascular surgery patients, critically ill patients, and critically ill patients, respectively, treated with either new or fresh or older blood. The outcome of these studies should not alter the current pressing need for better solutions to reduce transfusion-related adverse events and to improve clinical

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outcome. However, should they demonstrate that older blood has increased risk, it could result in an increased need for new technologies such as the HemoDefend™ platform. The preliminary results of the RECESS trial, giving new blood (10 days) versus older blood (21 days old) to 1,098 evaluable complex cardiac surgery patients, were recently announced and showed no difference in multiple organ dysfunction score (MODS) or mortality between patients getting new versus old blood. The incidence of serious adverse events was approximately 50% in both arms of the trial. We await the final paper and subgroup analyses as well as data from the completed ABLE trial.

Projected Timeline: The HemoDefend™ platform is a development stage product based on our advanced polymer technology. The base polymer is ISO 10993 biocompatible, meeting standards for biocompatibility, hemocompatibility, cytotoxicity, genotoxicity, acute sensitivity and complement activation. HemoDefend™ has demonstrated the *in vitro* removal of many different substances from blood such as antibodies, free hemoglobin, cytokines and bioactive lipids. We have also prototyped a number of different implementations of the HemoDefend™ technology, including the Beads in a Bag blood treatment blood storage bag, and standard in-line blood filters. We seek to out-license this technology to a strategic partner in the transfusion medicine space, but may elect to continue our development in parallel with out-licensing efforts.

ContrastSorb (Radiology and Interventional Radiology)

APPLICATION: Removal of IV contrast in blood administered during CT imaging, an angiogram, or during a vascular interventional radiology procedure, in order to reduce the risk of contrast-induced nephropathy.

Potential Benefits: IV contrast can lead to contrast-induced nephropathy (CIN) in susceptible patients. Risk factors include chronic kidney disease and renal insufficiency caused by age, diabetes, congestive heart failure, long-standing hypertension, and others co-morbid illnesses. CIN can lead to increased risk of patient morbidity and mortality. Removal of IV contrast by ContrastSorb may:

reduce the risk of acute kidney injury
improve the safety of these procedures and reduce the risk of morbidity and mortality

Background and Rationale: Contrast-induced nephropathy is the acute loss of renal function within the first 48 hours following IV contrast administration. IV contrast is widely administered to patients undergoing CT scans, to enhance the images and make it easier to identify anatomic structures. IV contrast is also administered during vascular interventional radiology procedures and angiography of blood vessels in the brain, heart, limbs, and other parts of the body to diagnose and treat atherosclerosis (narrowing of blood vessels due to cholesterol deposits), vascular injury, aneurysms, etc. The reported risk of CIN undergoing contrast enhanced CT scans has been reported to be 2 13%. For coronary intervention, the risk has been estimated to be as high as 20 30% in high risk patients with pre-existing renal insufficiency, and other risk factors. The use of low osmolar IV contrast, hydration of patients pre-procedure, orally administration of N-acetylcysteine, and other agents to prevent CIN have demonstrated modest benefit in some clinical studies, but in many cases, the results across studies have been equivocal and inconsistent. In high risk patients, the direct removal of IV contrast from the blood with ContrastSorb to prevent CIN represents a potentially more effective alternative.

Projected Timeline: ContrastSorb has demonstrated the high efficiency single pass removal of IV contrast and is in the process of optimization. The underlying polymer is made of the same ISO 10993 biocompatible polymer as CytoSorb®, but with different structural characteristics. The ContrastSorb device is a hemoperfusion device similar in construction to CytoSorb® and BetaSorb. Assuming successful optimization of the ContrastSorb polymer, safety and efficacy of IV contrast removal will need to be established in human clinical studies. We seek to out-license this technology to a potential strategic partner.

The BetaSorb™ Device (Chronic Care)

APPLICATION: Prevention and treatment of health complications caused by the accumulation of metabolic toxins in patients with chronic renal failure.

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Potential Benefits: If BetaSorb™ is able to prevent or reduce high levels of metabolic waste products from accumulating in the blood and tissues of long-term dialysis patients, we anticipate that the health complications characteristic to these patients can be prevented or mitigated. The primary goals for this application are to:

improve and maintain the general health of dialysis patients;
reduce disability and improve the quality of life of these patients;
reduce the total cost of patient care; and
increase life expectancy.

Background and Rationale: Our BetaSorb™ device is intended for use on patients suffering from chronic kidney failure who rely on long-term dialysis therapy to sustain life. Due to the widely recognized inability of dialysis to remove larger proteins from blood, metabolic waste products, such as Beta-2 microglobulin, accumulate to toxic levels and are deposited in the joints and tissues of patients. Specific toxins known to accumulate in these patients have been linked to their severe health complications, increased healthcare costs, and reduced quality of life.

Researchers also believe that the accumulation of toxins may play an important role in the significantly reduced life expectancy experienced by dialysis patients. In the U.S., the average life expectancy of a dialysis patient is five years. Industry research has identified links between many of these toxins and poor patient outcomes. If our BetaSorb™ device is able to routinely remove these toxins during dialysis and prevent or reduce their accumulation, we expect our BetaSorb™ device to maintain or improve patient health in the long-term. We believe that by reducing the incidence of health complications, the annual cost of patient care will be reduced and life expectancy increased.

The poor health experienced by chronic dialysis patients is illustrated by the fact that in the U.S. alone, more than $20 billion is spent annually caring for this patient population. While the cost of providing dialysis therapy alone is approximately $23,000 per patient per year, the total cost of caring for a patient ranges from $60,000 to more than $120,000 annually due to various health complications associated with dialysis.

Projected Timeline: We have collected a significant amount of empirical data for the development of this application. As the developer of this technology, we had to undertake extensive research, as no comparable technology was available for reference purposes. We have completed four human pilot studies, including a clinical pilot of six patients in California for up to 24 weeks in which our BetaSorb™ device removed the targeted toxin, beta2-microglobulin, as expected. In total, we have sponsored clinical studies utilizing our BetaSorb™ device on 20 patients involving approximately 345 total treatments. Each study was conducted by a clinic or hospital personnel with CytoSorbents providing technical assistance as requested.

As discussed above, due to practical and economic considerations, we are focusing our efforts and resources on commercializing our CytoSorb® device for critical care applications. Following commercial introduction of the CytoSorb® device, and with sufficient additional resources, we plan to continue development of the BetaSorb™ resin and may conduct additional clinical studies using the BetaSorb™ device in the treatment of end stage renal disease patients.

Commercial and Research Partners

University of Pittsburgh Medical Center

Two government research grants by the National Institutes of Health (NIH) and Health and Human Services (HHS) have been awarded to investigators at the University of Pittsburgh to explore the use of adsorbent polymers in the treatment of sepsis and organ transplant preservation. Under Sub Award Agreements with the University of

Pittsburgh, we have been developing polymers for use in these studies.

A grant of $1 million was awarded to the University of Pittsburgh Medical Center in 2003. The project seeks to improve the quantity and viability of organs donated for transplant by using CytoSorb® to detoxify the donor s blood. The observational and dosing phases of the study, involving 30 viable donors and eight non-viable donors, respectively, have been completed. The next phase of this study, the treatment phase, will involve viable donors. We are not currently focusing our efforts on the commercialization of CytoSorb® for

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application in organ donors. The treatment phase would be contingent upon further discussion with the FDA and HRSA regarding study design, as well as obtaining additional funding.

In addition, in September 2005, the University of Pittsburgh Medical Center was awarded a grant of approximately $7 million from NIH entitled Systems Engineering of a Pheresis Intervention for Sepsis (SEPsIS) to study the use of adsorbent polymer technology in the treatment of severe sepsis. The study, which lasted for a total of five years, commenced in September 2005. Under a SubAward Agreement, we worked with researchers at the University of Pittsburgh Critical Care Medicine Department. We believe that the only polymers used in this study were polymers we have developed specifically for use in the study, which are similar to the polymers used in our devices. Under the SubAward Agreement, for our efforts in support of the grant during 2006 through 2010, we received approximately $402,000.

These grants represent a substantial research cost savings to us and demonstrate the strong interest of the medical and scientific communities in our technology.

Researchers at UPMC have participated in nearly every major clinical study of potential sepsis intervention during the past twenty years. Drs. Derek Angus and John Kellum were investigators for Eli Lilly s sepsis drug, Xigris®. Dr. Kellum, a member of the UPMC faculty since 1994, is the Chairman of our Severe Sepsis and Inflammatory Disease Advisory Board. Dr. Kellum s research interests span various aspects of Critical Care Medicine, but center on critical care nephrology (including acid-base, and renal replacement therapy), sepsis and multi-organ failure, and clinical epidemiology. He is Chairman of the Fellow Research Committee at the University of Pittsburgh Medical Center, has authored more than 300 publications and has received numerous research grants from foundations and industry.

DARPA

In August 2012, the Defense Advanced Research Projects Agency (DARPA) awarded CytoSorbents a five-year technology development contract valued at $3.8 million as part of its Dialysis-Like Therapeutics (DLT) program to treat sepsis. DARPA has been instrumental in funding many of the major technological and medical advances since its inception in 1958, including development of the Internet, the GPS, and robotic surgery. The DLT program in sepsis seeks to develop a therapeutic blood purification device that is capable of identifying the cause of sepsis (e.g., cytokines, toxins, pathogens, activated cells) and remove these substances in an intelligent, automated, and efficient manner. DARPA is funding CytoSorbents to further develop its technologies to remove both cytokines and a variety of toxins (e.g., pathogen-derived, naturally occurring, or biowarfare generated). In 2013 and 2012, CytoSorbents recognized approximately $1.1 and $1.1 million in grant income following the successful completion of milestones under its contract.

United States Army

In December 2011 and September 2012, The US Army Medical Research and Material Command awarded CytoSorbents a $100,000 Phase I SBIR (Small Business Innovation Research), and a $1 million Phase II SBIR contract, respectively, to develop our technologies for the treatment of trauma and burn injury. During 2012, we received the full amount of the Phase I SBIR contract and in 2013 we recognized half of the approximately $753,000 awarded under the Phase II SBIR contract with the granting agency.

Fresenius Medical Care AG

In 1999, we entered into an exclusive, long-term agreement with Fresenius Medical Care for the global marketing and distribution of our BetaSorb™ device and any similar product we may develop for the treatment of renal disease. We

currently intend to pursue our BetaSorb™ product after the commercialization of the CytoSorb® product. At such time as we determine to proceed with our proposed BetaSorb™ product, if ever, we will need to conduct additional clinical studies using the BetaSorb™ device to obtain European or FDA approval.

Fresenius Medical Care is the world s largest, integrated provider of products and services for individuals with chronic kidney failure. Through its network of more than 2,100 dialysis clinics in North America, Europe, Latin America and Asia-Pacific, Fresenius Medical Care provides dialysis treatment to more than 163,000 patients around the globe. Fresenius Medical Care is also the world s largest provider of dialysis products, such as hemodialysis machines, dialyzers and related disposable products.

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Advisory Boards

From time to time our management meets with scientific advisors who sit on our Scientific Advisory Board, our Medical Advisory Board Critical Care Medicine, and our Medical Advisory Board Chronic Kidney Failure/Dialysis.

Our Scientific Advisory Board consists of three scientists with expertise in the fields of fundamental chemical research, and polymer research and development.

Our Sepsis Advisory Board consists of four medical doctors, one of whom is affiliated with UPMC, with expertise in critical care medicine, sepsis, multi-organ failure and related clinical study design.

Our Cardiac Advisory Board consists of seven medical doctors with deep expertise in cardiothoracic surgery and cardiac surgery clinical trials in the United States. They are guiding the development of the planned cardiac surgery clinical trial.

Our Trauma Advisory Board consists of four medical doctors with expertise in trauma, burn injury and critical care medicine.

We compensate members of our Advisory Boards at the rate of $2,000 for each full-day meeting they attend in person; $1,200 if attendance is by telephone. When we consult with members of our Advisory Board (whether in person or by telephone) for a period of less than one day, we compensate them at the rate of $200 per hour. We also reimburse members of our Advisory Boards for their travel expenses for attending our meetings.

Royalty Agreements

With Principal Stockholder

In August 2003, in order to induce Guillermina Vega Montiel, a principal stockholder of ours at the time, to make a $4 million investment in us, we granted Ms. Montiel a perpetual royalty equal to three percent of all gross revenues received by us from sales of CytoSorb® in the applications of sepsis, cardiopulmonary bypass surgery, organ donor, chemotherapy and inflammation control. In addition, for her investment, Ms. Montiel received 1,230,770 of our membership units, which at the time was a limited liability company. Those membership units ultimately became 185,477 shares of our common stock following our June 30, 2006 merger. For the year ended December 31, 2013 we recorded royalty costs of approximately $26,000.

With Purolite

In 2003, Purolite filed a lawsuit against us asserting, among other things, co-ownership and co-inventorship of certain of our patents. On September 1, 2006, the United States District Court for the Eastern District of Pennsylvania approved a Stipulated Order and Settlement Agreement under which we and Purolite agreed to the settlement of the action. The Settlement Agreement provides us with the exclusive right to use our patented technology and proprietary know how relating to adsorbent polymers for a period of 18 years. In particular, the Settlement Agreement relates to several of our issued patents and several of our pending patent applications covering our biocompatible polymeric resins, our methods of producing these polymers, and the methods of using the polymers to remove impurities from physiological fluids, such as blood. For the year ended December 31, 2013 per the terms of the license agreement we recorded royalty costs of approximately $21,000.

Under the terms of the Settlement Agreement, we have agreed to pay Purolite royalties of 2.5% to 5% on the sale of those of our products, if and when those products are sold commercially, that are used in direct contact with blood. However, if the first product we offer for commercial sale is a biocompatible polymer to be used in direct contact with a physiological fluid other than blood, royalties will be payable with respect to that product as well. The royalty payments provided for under the Settlement Agreement would apply to our currently envisioned CytoSorb® and BetaSorb™ products.

Following the expiration of the eighteen year term of the Settlement Agreement, the patents and patent applications that are the subject of the Settlement Agreement should have expired under current patent laws, and the technology claimed in them will be available to the public. However, following such time, we would continue to exclusively own any confidential and proprietary know how.

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Product Payment & Reimbursement

Critical Care Applications

Europe

Payment for our CytoSorb® device for the removal of cytokines in patients with life-threatening illnesses is country dependent in Europe. We are initially marketing the device in Germany where a path for separate CytoSorb® reimbursement has been established. Reimbursement can also be covered by the standard diagnosis related group (DRG) acute care reimbursement. Under this system, hospitals would purchase CytoSorb® and subtract the cost from a pre-determined lump-sum payment made by the payor to the hospital based on the patient s diagnosis. If we continue to gain traction of the CytoSorb® device into the German market we intend to apply for reimbursement in France, England, Italy and Spain representing the other four economic leaders in Europe and introduce our products in those countries accordingly. Reimbursement is specific to each country. There can be no assurances that reimbursement will be granted or that additional clinical data may not be required to establish reimbursement.

United States

We have not yet sought reimbursement for the CytoSorb® device in the United States, but expect to in the future. As in Germany, payment for our CytoSorb® device in the US for the treatment and prevention of sepsis and other related acute care applications is initially anticipated to fall under the DRG in-patient reimbursement system, which is currently the predominant basis of hospital medical billing in the United States. Under this system, predetermined payment amounts are assigned to categories of medical patients with respect to their treatments at medical facilities based on the DRG that they fall within (which is a function of such characteristics as medical condition, age, sex, etc.) and the length of time spent by the patient at the facility. Reimbursement is not determined by the actual procedures used in the treatment of these patients, and a separate reimbursement decision would not be required to be made by Medicare, the HMO or other provider of medical benefits in connection with the actual method used to treat the patient.

Critical care applications such as those targeted by our CytoSorb® device involve a high mortality rate and extended hospitalization, coupled with extremely expensive ICU time. In view of these high costs and high mortality rates, we believe acceptance of our proprietary technology by critical care practitioners and hospital administrators will primarily depend on safety and efficacy factors rather than cost.

Competition

General

We believe that our products represent a unique approach to disease states and health complications associated with the presence of larger toxins (often referred to as middle molecular weight toxins) in the bloodstream, including sepsis, acute respiratory distress syndrome, trauma, severe burn injury, pancreatitis, post-operative complications of cardiac surgery, damage to organs donated for transplant prior to organ harvest, and renal disease. Researchers have explored the potential of using existing membrane-based dialysis technology to treat patients suffering from sepsis. These techniques are unable to effectively remove the middle molecular weight toxins. We have demonstrated the statistically significant reduction of a number of key cytokines by CytoSorb® on the order of 30 50% in human patients with predominantly septic shock and acute respiratory distress syndrome. In a post-hoc subgroup analysis of our European Sepsis Trial, we have also demonstrated statistically significant improvements in mortality in patients at

high risk of death, including patients with either very high cytokine levels or patients older than age 65, both of which have a high predicted mortality.

The CytoSorb®, DrugSorb, ContrastSorb, and BetaSorb™ devices consist of a cartridge containing adsorbent polymer beads. The cartridge incorporates industry standard connectors at either end of the device which connect directly to an extra-corporeal circuit (bloodlines) on a standalone basis. The extra-corporeal circuit consists of plastic tubing through which the blood flows, our cartridge containing our adsorbent polymer beads, pressure monitoring gauges, and a blood pump to maintain blood flow. The patient s blood is accessed through a catheter inserted into his or her veins. The catheter is connected to the extra-corporeal circuit and the blood pump draws blood from the patient, pumps it through the cartridge and returns it back to the patient in a closed loop system. As blood passes over the polymer beads in the cartridge, toxins are adsorbed from the blood, without removing any fluids from the blood or the need for replacement fluid or dialysate.

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There are three common forms of blood purification, including hemodialysis, hemofiltration, and hemoperfusion. All modes are generally supported by standard hemodialysis machines. All take blood out of the body to remove toxins and unwanted substances from blood, and utilize extracorporeal circuits and blood pumps. Dialysis and hemofiltration remove substances from blood by diffusion and ultrafiltration, respectively, through a semi-permeable membrane, allowing the passage of certain sized molecules across the membrane, but preventing the passage of other, larger molecules. Hemoperfusion utilizes solid or porous sorbents to remove things based on pore capture and surface adsorption, not filtration.

CytoSorb® is a hemoperfusion cartridge, using an adsorbent of specified pore size, which controls the size of the molecules which can pass into the adsorbent and vastly increases the area available for surface adsorption. As blood flows over our polymer adsorbent, middle molecules such as cytokines flow into the polymer adsorbent and are adsorbed. Our devices do not use semipermeable membranes or dialysate. In addition, our devices do not remove fluids from the blood like hemodialysis or hemofiltration. Accordingly, we believe that our technology has significant advantages as compared to traditional dialysis techniques, including ease of use.

CytoSorbents HemoDefend™ platform is a development-stage technology utilizing a mixture of proprietary porous polymer beads that target the removal of contaminants that can cause transfusion reactions or cause disease in patients receiving transfused blood products. The HemoDefend™ beads can be used in multiple configurations, including the common in-line filter between the blood bag and the patient as well as a unique, patent-pending Beads in a Bag treatment configuration, where the beads are placed directly into a blood storage bag.

Sepsis

Researchers have explored the potential of using existing membrane-based dialysis technologies to treat patients suffering from sepsis. These techniques are unable to effectively remove middle molecular weight toxins, which leading researchers have shown to cause and complicate sepsis. The same experts believe that a blood purification technique that efficiently removes, or significantly reduces, the circulating concentrations of such toxins might represent a successful therapeutic option. CytoSorb® has demonstrated the ability to remove middle molecular weight toxins, such as cytokines, from circulating blood in a statistically significant manner.

Medical research during the past two decades has focused on drug interventions aimed at chemically blocking or suppressing the function of one or two inflammatory agents. In hindsight, some researchers now believe this approach has little chance of significantly improving patient outcomes because of the complex pathways and multiple chemical factors at play. Clinical studies of these drug therapies have been largely unsuccessful. An Eli Lilly drug, Xigris®, cleared by the FDA in November 2001, is the first and only drug to be approved for the treatment of severe sepsis. Clinical studies demonstrated that use of Xigris® resulted in an average absolute 6% reduction in 28-day mortality, and an absolute 13% reduction in 28-day mortality in the most severe sepsis patients. The drug remains controversial and is considered expensive when compared to the percentage of patients who benefit. In 2011 after completing a follow up study required by the FDA, it was subsequently determined that Xigris® does not have a statistically significant mortality benefit, and in October 2011, Eli Lilly withdrew Xigris® from all markets worldwide.

Pharmaceutical research for the treatment of sepsis continues with a number of clinical stage drug trials being presently conducted including, but not limited to, drug and biologic candidates from Eisai Co., Ltd, AM-Pharma B.V., Agennix AG and AstraZeneca/BTG plc. In February 2012, Agennix announced a halt to its Phase 2/3 OASIS sepsis trial due to increased mortality in treatment arm. The study is being un-blinded to further analyze the cause of this increased mortality. In January 2011, Eisai announced that its 2,000 patient pivotal Phase III ACCESS trial using Eritoran to treat patients with severe sepsis did not meet its primary endpoint of 28-day all-cause mortality, but will continue analyzing its clinical data and determine next steps. Eritoran is a toll-like receptor 4 (TLR-4) antagonist

designed to prevent or reduce activation of the immune system by endotoxin. In August 2012, AstraZeneca and partner BTG discontinued development of CytoFab after a failed Phase IIb study.

Using a medical device to treat sepsis remains a relatively novel treatment approach. Toray Industries currently markets an endotoxin removal cartridge called Toraymyxin™ for the treatment of sepsis in Europe, Japan, and 16 other countries, but is not yet approved in the United States. To date, it has been used to treat

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more than 80,000 patients since 1994. Toraymyxin does not directly reduce cytokines. Spectral Diagnostics, Inc has obtained exclusive development and commercial rights in the U.S. for Toraymyxin, with plans to combine the use of its endotoxin activity assay to create a theranostic product. In June 2010, Spectral began enrollment of its targeted 360 patient, 30-site randomized, controlled U.S. Phase III trial (EUPHRATES) to diagnose endotoxemia and then treat sepsis with Toraymyxin. Approximately 200 patients have enrolled to date. The endpoint of the trial is 28-day all-cause mortality. In a second interim analysis announced in January 2014, following the enrollment of 184 patients with 28-day follow-up, the DSMB has recommended that the trial continue, but has asked that further analysis be performed before recalculation of the trial s sample size is finalized. To date, all anti-endotoxin strategies have failed in large scale randomized controlled sepsis trials. Toray also markets its Hemofeel CH1.0 polymethylmethacrylate membrane (PMMA) in Japan and it has been used in several non-controlled, or historically controlled, clinical or case studies treating patients with sepsis, acute respiratory distress syndrome and pancreatitis. We are not aware of any prospective, randomized controlled studies using this PMMA hemofilter in patients with sepsis. Without such studies, it is difficult to assess the true impact of this technology in these conditions. Gambro AB launched its Prismaflex eXeed system in August 2009 and introduced the SepteX high molecular weight cutoff hemodialyzer in Europe, intended to treat patients with acute renal failure and the removal of inflammatory mediators from blood. It is not specifically approved for the treatment of sepsis. Fresenius has launched a similar high molecular weight cut off filter called the Ultraflux EMiC2. To our knowledge, there has been a lack of published data on the treatment of sepsis with these devices. Bellco S.R.L. also sells the CPFA (coupled plasma filtration and adsorption) system in Europe. This uses a sorbent cartridge to remove cytokines from plasma. However, because the sorbent cannot treat blood directly, it requires the cost and complexity of an additional plasma separator to treat blood. Kaneka Corporation currently markets Lixelle™, a modified porous cellulosic bead, for the removal of beta2-microglobulin during hemodialysis in Japan. Lixelle has been used in several small human pilot studies including a 5 patient pilot study in 2002 and a 4 patient pilot study in 2009. Though these studies correlate Lixelle use with cytokine reduction, they are not randomized, controlled studies and so do not control for natural cytokine clearance. To our knowledge, no large, randomized, controlled trials have been conducted with Lixelle as a treatment for sepsis. Kaneka has since developed a modified cellulosic resin called CTR that can also remove cytokines from experimental pre-clinical systems. In 2009, CTR was used in an 18-patient randomized, controlled trial in patients with septic shock with undisclosed improvements in APACHE II scores and IL-6 and IL-8. To our knowledge, Kaneka has not conducted or published any other study using CTR to treat human sepsis patients since then. Ube Industries, LTD is currently developing an adsorbent resin called CF-X for the removal of cytokines. To our knowledge, Ube has not published any study using CF-X to treat human sepsis patients. CytoPherx Inc., has developed an extracorporeal system based on selective cytapheresis, or the inactivation or removal of activated leukocytes. It was enrolling a 344 patient pivotal trial that began in August 2011 and was expected to be completed by December 2014 in patients with acute kidney injury with or without severe sepsis, on continuous renal replacement therapy with the goal of reducing mortality. This system does not remove cytokines directly, but attempts to reduce the numbers of activated white blood cells that can produce cytokines or cause cell-mediated injury. The status of the trial is unknown. ExThera Medical Corporation has developed its Seraph™ (Selective Removal by Apheresis) platform that consists of heparin coated, solid polyethylene beads. Heparin has the ability to bind some, but not all viruses, bacteria, toxins and cytokines. In *in vitro* studies using 1 mL of human septic blood, there was no statistically different change in IL-6 or Interferon-gamma compared to control, but effected a ~50% reduction in TNF-alpha. This inability to remove a broad range of cytokines will likely limit its efficacy as a treatment in sepsis. It has repositioned Seraph™ as a pathogen removal technology, and plans to conduct a human trial in Germany in the future. In addition, it has partnered with BioBridge Global to apply its technology to pathogen reduction in transfused blood products. Other potential competitors include the now defunct Arbios Systems, Inc. Hemolife Medical, Inc. and Hemocleanse Technologies, LLC. We believe our CytoSorb® cartridge has significant competitive, technological, and economic advantages over systems by these other companies.

Acute Respiratory Distress Syndrome (ARDS)

Treatment of ARDS is predominantly supportive care using supplemental oxygen, careful fluid management and multiple modes of ventilation incorporating the concepts of low tidal volume, high frequency oscillation,

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and prone ventilation. Corticosteroids, nitric oxide, and surfactant therapy have been tried, but are not indicated for the treatment of ARDS. We are not aware of any specific products approved to treat ARDS.

Severe Burn Injury

Modern management of severe burn injury patients involves a combination of therapies. From a burn standpoint, patients undergo active escharotomy and debridement of burns, the use of skin grafts and substitutes, anti-microbial dressings and negative pressure dressings. Tight fluid control, nutrition, prevention of hypothermia and infection are also priorities. Smoke and chemical inhalation injury in burn victims is also common and increasing as a cause of death in severe burn injury. Carbon monoxide and cyanide poisoning is also an issue. Supplemental oxygen and mechanical ventilation are often required and are the mainstay of supportive care treatment. Recently continuous renal replacement therapy has been used to treat patients with acute kidney injury with an improvement in survival compared to a historical control cohort. We believe CytoSorb® therapy may yield improved results. We are not aware of any specific products approved to directly address inhalational lung injury or multiple organ failure in severe burn injury.

Trauma

Trauma management initially involves respiratory, hemodynamic and physical stabilization of the patient. However, in the days to weeks that ensue, the focus shifts to preventing or treating organ failure and preventing or treating infection. We are not aware of any specific therapies to prevent or treat multiple organ dysfunction or multiple organ failure in trauma. Rhabdomyolysis, or the breakdown of muscle fibers due to crush injury or other means, occurs in trauma and can lead to acute kidney injury or renal failure. Aggressive hydration, urine alkalinzation, and forced diuresis are the main therapies to prevent renal injury. Continuous hemodiafiltration with super-high-flux membranes has demonstrated modest myoglobin clearance but was associated with albumin loss. In general, however, most extracorporeal therapies are not well-suited to remove myoglobin. We have developed a polymer resin that removes myoglobin efficiently without major losses of albumin. The US Army Medical Research and Materiel Command has funded the development of our polymer resins to treat trauma and rhabdomyolysis under a Phase I and Phase II SBIR grant awarded to CytoSorbents in December 2011 and September 2012, respectively.

Severe Acute Pancreatitis

Treatment of severe acute pancreatitis is predominantly supportive care focused on aggressive hydration, intravenous nutrition and pain control. Mechanical ventilation, hemodialysis and vasopressor use is common in cases of multiple organ failure. In cases where cholelithiasis or other obstruction is the underlying cause of the pancreatitis, endoscopic retrograde cholangiopancreatography and/or stent placement can be used to relieve the obstruction. Antibiotics are often instituted to prevent or treat infection. Surgery is sometimes indicated to remove or drain necrotic or infected portions of the pancreas. To our knowledge, there are no other specific treatments approved to treat severe acute pancreatitis or multiple organ failure that is caused by systemic inflammation in this disease.

Cardiopulmonary Bypass Surgery

There is currently a pre-existing market for the use of leukocyte reduction filters sold by Pall Corporation, Terumo Medical Corporation and others in the cardiopulmonary bypass circuit. The purpose of these devices is to reduce cytokine-producing white blood cells from blood. They do not remove cytokines directly and are not considered by many to be an effective solution for cytokine reduction. We are not aware of any practical competitive approaches for removing cytokines in CPB patients. To our knowledge, CytoSorb® is the only cytokine reduction therapy capable of being placed directly into a bypass circuit in the heart-lung machine without the need for another pump. Alternative

therapies such as off-pump surgeries are available but post-bypass syndrome and cytokine production still remain a problem in this less invasive, but more technically challenging procedure. If successful, CytoSorb® is expected to be useful in both on-pump and off-pump procedures.

Radiocontrast Removal

ContrastSorb has demonstrated the rapid, high efficiency single pass removal of IV contrast. The use of low osmolar IV contrast, oral administration of N-acetylcysteine, and other agents to prevent CIN have

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demonstrated modest benefit in some clinical studies, but in many cases, the results across studies have been equivocal and inconsistent. Hydration of high risk patients pre-procedure is standard of care but has limited efficacy. PLC Medical Systems, Inc, received CE Mark approval for its RenalGuard system in 2007. RenalGuard encourages excretion of IV contrast and a reduction of CIN, by administering IV hydration that matches urine output in patients receiving a loop diuretic. Hemodialysis can remove IV contrast, but is relatively slow (46% at 1 hour, 65% at 2 hours, 75% at 3 hours) in chronic renal failure patients who lack normal renal clearance. In high risk patients, the rapid and direct removal of IV contrast from the blood with ContrastSorb to prevent CIN represents a potentially more effective alternative.

Chronic Dialysis

Although standard dialysis treatment effectively removes urea and creatinine from the blood stream (which are normally filtered by functioning kidneys), standard dialysis has not been effective in removing beta2-microglobulin toxins from the blood of patients suffering from chronic kidney failure. High flux dialyzers by Gambro, Fresenius, Nephros and others are capable of removing some beta2-microglobulin. However, we believe our technology would significantly improve clearance of this and other toxins. Kaneka markets Lixelle™ outside the US to remove beta2-microglobulin in dialysis patients. We know of no other device, medication or therapy considered directly competitive with our technology.

Efforts to improve removal of middle molecular weight toxins with enhanced dialyzer designs have achieved modest success. Many experts believe that dialyzer technology has reached its limit in this respect. A variation of high-flux hemodialysis, known as hemodiafiltration, has existed for many years. However, due to the complexity, cost and increased risks, this dialysis technique is less widely used. In addition, many larger toxins are not effectively filtered by hemodiafiltration, despite its more open pore structure. As a result, hemodiafiltration is expected to be less efficient in large toxin removal compared with the BetaSorb™ device. In terms of resin technology, Kaneka Corporation is the only company currently marketing a resin cartridge (Lixelle) in Japan designed to address this need.

Treatment of Organ Dysfunction in Brain-Dead Organ Donors

We are not aware of any directly competitive products to address the application of our technology for the mitigation of organ dysfunction and failure resulting from severe inflammation following brain-death.

HemoDefend Purification Technology Platform for Transfused Blood Products

There are only a few directly competitive approved products to address the removal of substances from blood and blood products that can cause transfusion reactions, Leukoreduction (Pall Corporation, Terumo-BCT, Hemerus Corporation, others) is widely used in transfusion medicine and can remove the majority of white cells that can produce new cytokines but cannot eliminate those cytokines already in blood, and cannot otherwise remove other causative agents. Automated washing of pRBC is very effective at cleansing contaminants from blood, but is impractical due to the time, cost, and logistics of washing each unit of blood and is not widely used. Blood filters that utilize affinity technologies are in development to remove certain substances such as antibodies from blood, but have other issues, such as cost and concern about the stability or leachability of the affinity technology. The HemoDefend™ platform represents a potentially superior alternative to these methods, as it can provide comprehensive removal of a wide variety of contaminants that can trigger transfusion reactions without washing blood, requires no additional equipment, energy source, or manipulation, and can be incorporated directly into the blood storage bag or used as an in-line blood filter.

Clinical Studies

Our first clinical studies were conducted in patients with chronic renal failure. The health of these patients is challenged by high levels of toxins circulating in their blood but, unlike sepsis patients, they are not at imminent risk of death. The toxins involved in chronic renal failure are generally different from those involved in sepsis, eroding health gradually over time. The treatment of patients with chronic renal failure is a significant target market for us, although not the current focus of our efforts and resources. Our clinical studies and product development work in this application functioned as a low risk method of evaluating the safety of the technology in a clinical setting, with direct benefit to the development of the critical care applications on which we are now focusing our efforts.

We are focusing our research efforts on critical care applications of its technology.

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Sepsis

In 2011, the CytoSorb® filter received European Union regulatory approval under the CE Mark as an extracorporeal cytokine filter to be used in clinical situations where cytokines are elevated. As part of the CE Mark approval process, we completed our randomized, controlled, European Sepsis Trial amongst fourteen trial sites in Germany, with enrollment of one hundred (100) patients with sepsis and respiratory failure. The purpose of the trial was to demonstrate safety and the broad reduction of key cytokines such as IL-6 in critically-ill patients. Taking into account all 100 patients, the treatment was well-tolerated with no serious device related adverse events reported in more than 300 human treatments in the trial. Although the trial was not powered to demonstrate significant reduction in other clinical endpoints such as mortality, these were also included as secondary and exploratory endpoints in the trial.

The first 22 patients in the study represented a sepsis pilot study. In the next 31 patients, a compromise of the manual randomization schedule at two trial sites led to an imbalance in the severity of illness between the control and treatment patient groups of the study. After a thorough review, the Scientific Advisory Board (SAB) and the independent Data Safety Monitoring Board (DSMB) both recommended that due to this enrollment bias, these 31 patients should only be used for safety evaluation purposes and that new patients should be enrolled into the trial using electronic web-based randomization to randomly assign patients into either the control or treatment arms.

Excluding four patients that withdrew, the remaining forty three (43) patients enrolled under electronic randomization were relatively balanced in terms of the severity of illness in treatment and control patients, confirming the findings of the SAB and DSMB. In these forty three (43) patients the European Sepsis Trial successfully demonstrated, on a statistically significant basis ($p<0.05$), CytoSorb® s ability to reduce circulating levels of key cytokines from whole blood in treated patients on the average of 30 50% over the 7 day treatment period. Additionally, post-hoc subgroup analyses of the clinical outcome data from patients enrolled under electronic randomization demonstrated statistically significant reduction in mortality in patients at high risk of death in sepsis, specifically in patients with:

Very high cytokine levels (IL-6 1,000 pg/mL and/or IL-1ra 16,000 pg/mL) where 28-day mortality was 0% treated vs 63% control, $p=0.03$, $n=14$, and

Age 65 (14-day mortality: 0% treated vs 36% control, $p=0.04$, $n=21$).

In patients aged 65 years old, however, seven days of treatment with CytoSorb® was not adequate to extend the observed 14-day mortality benefit out to 28-days (40% vs 45% control, $p=0.6$, $n=21$). These critically ill patients carried two major mortality risk factors: multiple organ failure and age 65 years old, which itself confers a 2.3-fold relative risk of death. Treatment of life-threatening infections with antibiotics often requires 7 14 days of treatment. We hypothesize that treatment of the run-away immune response should mirror treatment with antibiotics. We are currently conducting a dose ranging study (Dosing Study) in Germany amongst eight clinical trial sites to evaluate the safety and efficacy of CytoSorb® when used continuously for 7 days, or for 6 hours per day for more than 7 days. Patients are being stratified for age, cytokine levels, and co-morbid illnesses in this matched pairs analysis. Data from this Dosing study are intended to help clinicians with additional treatment options for CytoSorb®, help support the positive clinical data from tour first European Sepsis Trial, and help shape the trial protocol for a U.S. based pivotal study.

At the end of 2013, we reported a clinical update on the first 28 treated patients that were enrolled in the first arm of the Dosing study (24 hours of treatment for 7 days, each day with a new device). Treatment was safe and well-tolerated at flow rates up to 300 mL/min, with no serious device related adverse events. 24-hour treatment increased platelet reduction compared to 6-hour treatment in the EST, but with no reported complications. Broad spectrum antibiotics, such as the carbapenem class, were compatible with CytoSorb®, requiring only modest dose adjustments. IL-6 reduction continued throughout the entire 24-hour period, higher at the beginning of treatment when IL-6 levels are highest, and with an overall average instantaneous IL-6 reduction of 8% per pass. In this preliminary

analysis, the overall 28-day all-cause mortality and 28-day all-cause mortality in patients 65 years and older was not statistically different from the treatment data reported in the EST (electronic randomized cohort). Severity of illness in the overall treatment groups were comparably high, with 50% or more of the treated patients (dosing > EST) having an APACHE II severity of

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illness score > 25 at the time of enrollment, predicting very high mortality of 55% or more. In comparison, the overall control patients reported in the EST (electronic randomization cohort) had a lower severity of illness with only 20% having an APACHE 2 score > 25.

In 2007, CytoSorbents received FDA approval of its investigational device exemption (IDE) application to run a single center sepsis study in the United States. We have since generated safety data in approximately 500 human treatments in patients with septic shock and multiple organ failure in its European Sepsis Trial and Dosing study. Assuming availability of adequate and timely funding, and continued positive results from our clinical studies, we intend to continue commercializing our product in Europe while pursuing pivotal sepsis studies in the E.U. and U.S.

Cardiac Surgery

With adequate funding and continued positive data, we intend to conduct clinical studies using CytoSorb® in cardiac surgery patients in the U.S. We seek to demonstrate the ability of CytoSorb®, when used intra-operatively in a bypass circuit in a heart-lung machine, to improve clinical outcome and reduce cytokines and free hemoglobin that are generated during cardiac surgery procedures in high risk patients. We also look to foster data on the ability of CytoSorb® to resolve post-operative SIRS in cardiac surgery patients, when administered post-operatively with standard hemodialysis machines.

Trauma

In June 2013, we announced that the U.S. Air Force will fund a 30 patient, single site, randomized controlled human pilot study in the United States amongst trauma patients with rhabdomyolysis most commonly associated with trauma. The primary endpoint is myoglobin removal. The FDA has approved our Investigational Device Exemption (IDE) application for this study. We have recently received ethics committee approval to proceed, and the study is anticipated to commence enrollment shortly.

Other Critical Care Applications

There are currently more than 40 ongoing investigator initiated studies being planned or enrolling in Germany, Austria and the United Kingdom. These trials, which are funded and supported by renowned university hospitals and key opinion leaders, will provide invaluable information regarding the success of the device in the treatment of sepsis, cardiac surgery, trauma, burn injury, pancreatitis, liver failure, acute kidney injury, acute respiratory distress syndrome, and many other indications, and will be integral to helping us determine the ultimate course of our U.S. clinical trial pathway.

Even though we have obtained CE Mark approval, no assurance can be given that our CytoSorb® product will work as intended in these studies or that we will be able to obtain FDA approval to sell CytoSorb® in the U.S. Even though we have obtained CE Mark approval, there is no guarantee or assurance that we will be successful in obtaining FDA approval in the United States or approval in any other country or jurisdiction. Because of the limited studies we have conducted, we are subject to substantial risk that our technology will have little or no effect on the treatment of any indications that we have targeted.

Government Research Grants

A grant of $1 million was awarded to the University of Pittsburgh Medical Center in 2003. The project seeks to improve the quantity and viability of organs donated for transplant by using CytoSorb™ to detoxify the donor s blood.

The observational and dosing phases of the study, involving 30 viable donors and eight non-viable donors, respectively, have been completed. The next phase of this study, the treatment phase, will involve viable donors. We are not currently focusing our efforts on the commercialization of CytoSorb™ for application in organ donors. The treatment phase would be contingent upon further discussion with the FDA and HRSA regarding study design, as well as obtaining additional funding.

In addition, in September 2005, the University of Pittsburgh Medical Center was awarded a grant of approximately $7 million from NIH entitled Systems Engineering of a Pheresis Intervention for Sepsis (SEPsIS) to study the use of adsorbent polymer technology in the treatment of severe sepsis. The study, which lasted for a total of five years, commenced in September 2005. Under a SubAward Agreement, we worked with researchers at the University of Pittsburgh Critical Care Medicine Department. We believe that the only polymers used in this study were polymers we have developed specifically for use in the study,

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which are similar to the polymers used in our devices. Under the SubAward Agreement, for our efforts in support of the grant during 2006 through 2010, we received approximately $402,000.

In October 2010 CytoSorbents was awarded a grant of approximately $489,000 from the federal Qualifying Therapeutic Discovery Project (QTDP) program for two products in its pipeline including the development of CytoSorb® for the treatment of sepsis and other critical care illnesses. We received half of the grant in November 2010 and the second half in February 2011.

In December 2011 CytoSorbents was awarded a $100,000 Phase I SBIR (Small Business Innovation Research) contract, and subsequently a $50,000 Phase I extension, by the US Army Medical Research and Materiel Command to evaluate our technology for cytokine and myoglobin removal in the treatment of burn injury and trauma. This work is supported by the U.S. Army Medical Research and Material Command under an amendment to Contract W81XWH-12-C-0038.

In August 2012, the Defense Advanced Research Projects Agency (DARPA) awarded CytoSorbents a five-year technology development contract valued at $3.8 million as part of its Dialysis-Like Therapeutics (DLT) program to treat sepsis. DARPA is funding CytoSorbents to further develop its technologies to remove both cytokines and a variety of toxins (e.g. pathogen-derived, naturally occurring, or biowarfare generated). CytoSorbents work is supported by DARPA and SSC Pacific under Contract No. N66001-12-C-4199.

In September 2012 CytoSorbents was awarded a $1 million Phase II SBIR (Small Business Innovation Research) contract by the US Army Medical Research and Materiel Command to evaluate our technology for the treatment of trauma and burn injury in large animal models. In 2013, we finalized a Phase II SBIR contract for approximately $753,000 with the granting agency. This work is supported by the U.S. Army Medical Research and Material Command under an amendment to Contract W81XWH-12-C-0038.

In June 2013, we announced that the U.S. Air Force will fund a 30 patient, single site, randomized controlled human pilot study in the United States amongst trauma patients with rhabdomyolysis. Though CytoSorbents does not expect to receive material direct funding from this $3 million budgeted program, the study may generate valuable data that can be used commercially or in future trauma studies.

In September 2013, the National Heart, Lung, and Blood Institute (NHLBI), a division of the National Institutes of Health (NIH), awarded us a Phase I SBIR (Small Business Innovation Research) contract to further advance our HemoDefend™ blood purification technology for packed red blood cell (pRBC) transfusions. The project, entitled Elimination of blood contaminants from pRBCs using HemoDefend™ hemocompatible porous polymer beads, is valued at $203,351 over six months. The overall goal of this program is to reduce the risk of potential side effects of blood transfusions, and help to extend the useful life of pRBCs.

Our business could be adversely impacted by automatic cuts in Federal spending. The American Taxpayer Relief Act (ATRA) of 2012, referred to generally as the fiscal cliff deal, that went into effect on March 1, 2013, enacted automatic spending cuts of nearly $1 trillion over the next 10 years (commonly known as sequestration) that were included under the Budget Control Act of 2011. Sequestration may delay payments under the DARPA and SBIR grant agreements, although no material delays have occurred to date. The economic impact of the sequester in the US in 2014 is expected to be less than seen in 2013. The short term and long term economic impact of the sequestration will not be known until the actual spending cuts are implemented and the economic impact of the changes in the budget and taxes are known. It will take an extended number of years to understand the impact of any changes brought about from the sequester.

These grants represent a substantial research cost savings to us and demonstrate the strong interest of the medical and scientific communities in our technology.

Regulation

The medical devices that we manufacture are subject to regulation by numerous regulatory bodies, including the FDA and comparable international regulatory agencies. These agencies require manufacturers of medical devices to comply with applicable laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of medical devices. Devices are generally subject to varying levels of

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regulatory control, the most comprehensive of which requires that a clinical evaluation program be conducted before a device receives approval for commercial distribution.

In the European Union, medical devices are required to comply with the Medical Devices Directive and obtain CE Mark certification in order to market medical devices. The CE Mark certification, granted following approval from an independent Notified Body, is an international symbol of adherence to quality assurance standards and compliance with applicable European Medical Devices Directives. Distributors of medical devices may also be required to comply with other foreign regulations such as Ministry of Health Labor and Welfare approval in Japan. The time required to obtain these foreign approvals to market our products may be longer or shorter than that required in the U.S., and requirements for those approvals may differ from those required by the FDA.

In March 2011 we successfully completed our technical file review with the Notified Body, and received approval to apply the CE Mark to the CytoSorb® device as an extracorporeal cytokine filter. CytoSorbents also achieved ISO 13485:2003 Full Quality Systems certification, an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in the E.U.

In the U.S., permission to distribute a new device generally can be met in one of two ways. The first process requires that a pre-market notification (510(k) Submission) be made to the FDA to demonstrate that the device is as safe and effective as, or substantially equivalent to, a legally marketed device that is not subject to pre-market approval (PMA). A legally marketed device is a device that (i) was legally marketed prior to May 28, 1976, (ii) has been reclassified from Class III to Class II or I, or (iii) has been found to be substantially equivalent to another legally marketed device following a 510(k) Submission. The legally marketed device to which equivalence is drawn is known as the predicate device. Applicants must submit descriptive data and, when necessary, performance data to establish that the device is substantially equivalent to a predicate device. In some instances, data from human clinical studies must also be submitted in support of a 510(k) Submission. If so, these data must be collected in a manner that conforms with specific requirements in accordance with federal regulations. The FDA must issue an order finding substantial equivalence before commercial distribution can occur. Changes to existing devices covered by a 510(k) Submission which do not significantly affect safety or effectiveness can generally be made by us without additional 510(k) Submissions.

The second process requires that an application for premarket approval (PMA) be made to the FDA to demonstrate that the device is safe and effective for its intended use as manufactured. This approval process applies to most Class III devices. In this case, two steps of FDA approval are generally required before marketing in the U.S. can begin. First, investigational device exemption (IDE) regulations must be complied with in connection with any human clinical investigation of the device in the U.S. Second, the FDA must review the PMA application that contains, among other things, clinical information acquired under the IDE. The FDA will approve the PMA application if it finds that there is a reasonable assurance that the device is safe and effective for its intended purpose.

In the United States, our CytoSorb® and BetaSorb™ devices are classified as Class III (CFR 876.5870 Sorbent Hemoperfusion System) 510(k) devices, but may require pre-market approval (PMA) by the FDA. In Europe, our devices are classified as Class IIb, and will need to conform to the Medical Devices Directive.

The process of obtaining clearance to market products is costly and time-consuming in virtually all of the major markets in which we expect to sell products and may delay the marketing and sale of our products. Countries around the world have recently adopted more stringent regulatory requirements, which are expected to add to the delays and uncertainties associated with new product releases, as well as the clinical and regulatory costs of supporting those releases. No assurance can be given that any of our other medical devices will be approved on a timely basis, if at all,

or that our CytoSorb® device will be approved for CE Mark labeling in other potential medical applications or that it will be approved for cytokine filtration in markets not covered by the CE Mark on a timely basis, or at all. In addition, regulations regarding the development, manufacture and sale of medical devices are subject to future change. We cannot predict what impact, if any,

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those changes might have on our business. Failure to comply with regulatory requirements could have a material adverse effect on our business, financial condition and results of operations.

Exported devices are subject to the regulatory requirements of each country to which the device is exported. Some countries do not have medical device regulations, but in most foreign countries medical devices are regulated. Frequently, regulatory approval may first be obtained in a foreign country prior to application in the U.S. to take advantage of differing regulatory requirements.

Sales and Marketing

In 2012, we established our European subsidiary, CytoSorbents Europe GmbH, a wholly-owned subsidiary of CytoSorbents Corporation. Located in Berlin, Germany, it serves as the center of our sales activities in Europe. Following the completion of a controlled market release in late June 2012, CytoSorb® was formally launched in Germany with reimbursement established at more than $500 per cartridge. We recruited Dr. Christian Steiner, MD as our Vice President of Sales and Marketing and hired three additional sales representatives who completed training in Q3 2012. Q4 2012 was the first full quarter of direct CytoSorb® sales with our sales force in place. We began expansion into Austria, where reimbursement for CytoSorb® is now available, and Switzerland. From the beginning of the controlled market release in Q4 2011 through the end of December 31, 2013, we achieved cumulative sales of approximately $1,009,000 in sales of CytoSorb®. At the end of 2013, we had more than 100 key opinion leaders (KOL) who were either using CytoSorb® or interested in using it in clinical practice and/or in clinical studies. These KOL relationships were an essential step in our initial goal of driving usage, adoption and reorders of CytoSorb® as they facilitate ordering and reimbursement within the hospital, have a strong influential role within their department and amongst their peers and colleagues outside the hospital, and have the ability to conduct studies and generate data, papers and conference presentations that could drive awareness and demand.

We are approved to sell CytoSorb® in all 28 countries in the European Union, including Germany, United Kingdom, Italy, France and Spain. We plan to expand to other countries in the E.U., and with registration, other countries outside the E.U. that will accept CE Mark approval with a mixed direct and independent distributor strategy, that can be augmented through strategic partnerships. We currently have distributorships in the U.K., Ireland, the Netherlands, Turkey, Russia, and India. In India, we have established a strategic partnership with Biocon Ltd., India s largest biotechnology company, with an initial focus on exclusive distribution of CytoSorb® in India, and select emerging countries. In April, 2014, the Company announced distribution of CytoSorb® in the Middle East, including Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, Bahrain, and Oman (the Gulf Cooperation Council or GCC) and Yemen, Iraq, and Jordan through an exclusive agreement with Techno Orbits. In August 2014, the Company announced exclusive distribution of CytoSorb® in Taiwan with Hemoscien Corporation. Registration and reimbursement in other countries may or may not require additional clinical data. We plan to continue our commercialization plans in Europe provided we receive adequate and timely funding to support our planned activities and that our products continue to perform as expected in clinical studies.

Intellectual Property and Patent Litigation

The medical device market in which we primarily participate is in large part technology driven. As a result, intellectual property rights, particularly patents and trade secrets, play a significant role in product development and differentiation. However, intellectual property litigation to defend or create market advantage is inherently complex, unpredictable and is expensive to pursue. Litigation often is not ultimately resolved until an appeal process is completed and appellate courts frequently overturn lower court patent decisions.

Moreover, competing parties frequently file multiple suits to leverage patent portfolios across product lines, technologies and geographies and to balance risk and exposure between the parties. In some cases, several competitors are parties in the same proceeding, or in a series of related proceedings, or litigate multiple features of a single class of devices. These forces frequently drive settlement not only of individual cases, but also of a series of pending and potentially related and unrelated cases. In addition, although monetary and injunctive relief is typically sought, remedies are generally not determined until the conclusion of the proceedings, and are frequently modified on appeal. Accordingly, the outcomes of individual cases are difficult to time, predict or quantify and are often dependent upon the outcomes of other cases in other forums, both domestic and international.

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We rely on a combination of patents, trademarks, trade secrets and non-disclosure agreements to protect our intellectual property. We hold 32 issued U.S. patents, some of which have foreign counterparts, and additional patent applications pending worldwide that cover various aspects of our technology. There can be no assurance that pending patent applications will result in issued patents, that patents issued to us will not be challenged or circumvented by competitors, or that such patents will be found to be valid or sufficiently broad to protect our technology or to provide us with a competitive advantage.

We also rely on non-disclosure and non-competition agreements with employees, consultants and other parties to protect, in part, trade secrets and other proprietary technology. There can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop equivalent proprietary information or that third parties will not otherwise gain access to our trade secrets and proprietary knowledge.

Several years ago we engaged in discussions with the Dow Chemical Company, which had indicated a strong interest in being our polymer manufacturer. After a Dow representative on our Advisory Board resigned, Dow filed and received five patents naming our former Advisory Board member as an inventor. These patents, two of which subsequently lapsed for failure to pay maintenance fees, concern the area of coating high divinylbenzene-content polymers to render them hemocompatible, and using such coated polymers to treat blood or plasma. In management s view the Dow patents improperly incorporate our technology, are based on our proprietary technology, and should not have been granted to Dow. While we believe that our own patents would prevent Dow from producing our products as they are currently envisioned, Dow could attempt to assert its patents against us. To date, to our knowledge, Dow has not utilized their patents for the commercial manufacture of products that would be competitive with us, and we currently have no plans to challenge Dow s patents. However, the existence of these Dow patents could result in a potential dispute with Dow in the future and additional expenses for us.

We may find it necessary to initiate litigation to enforce our patent rights, to protect our trade secrets or know-how and to determine the scope and validity of the proprietary rights of others. Patent litigation can be costly and time-consuming, and there can be no assurance that our litigation expenses will not be significant in the future or that the outcome of litigation will be favorable to us. Accordingly, we may seek to settle some or all of our pending litigation described below. Settlement may include cross-licensing of the patents which are the subject of the litigation as well as our other intellectual property and may involve monetary payments to or from third parties.

Employees

As of October 20, 2014, we had thirty-four full-time employees. We also utilize consultants and temporary service providers who are not employees of the Company, as necessary. None of our employees are represented by a labor union or are subject to collective-bargaining agreements. We believe that we maintain good relationships with our employees.

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DESCRIPTION OF PROPERTY

We currently operate a facility near Princeton, New Jersey with approximately 10,750 sq. ft., housing research laboratories, clinical manufacturing operations and administrative offices, under a lease agreement, of which 950 sq. ft. expire in February 2015 and 9,800 sq. ft. expire in May 2015. In the opinion of management, the leased properties are adequately insured, are in good condition and suitable for the conduct of our business. We also collaborate with numerous institutions, universities and commercial entities who conduct research and testing of our products at their facilities. We rent this space for approximately $27,000 per month.

We also operate a small office facility in Berlin, Germany housing sales and administrative offices. We entered into a lease for this office on March 1, 2012. The lease expires on February 28, 2016. We rent this space for €1,200 per month or approximately US$1,500 per month.

LEGAL PROCEEDINGS

The Company is currently not involved, but may at times be involved in various claims and legal actions. Management is currently of the opinion that these claims and legal actions would have no merit, and any ultimate outcome will not have a material adverse impact on the consolidated financial position of the Company and/or the results of its operations.

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MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our Common Stock presently trades in the over-the-counter-market (OTC) on the OTCQB Marketplace, operated by the OTC Markets Group, Inc., (OTCQB), under the symbol CTSOD (until on or about January 4, 2015) and CTSO (beginning on or about January 5, 2015). The OTCQB is a quotation service that displays real-time quotes, last-sale prices, and volume information in the OTC equity securities. An OTCQB equity security generally is any equity security that is not listed or traded on a national securities exchange. Prior to May 2010, our common stock traded under the symbol MSBT , but was changed to CTSO as part of our name change to CytoSorbents Corporation.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. Immediately after the reverse stock split, on December 3, 2014 we changed our state of incorporation from the State of Nevada to the State of Delaware pursuant to an Agreement and Plan of Merger, dated December 3, 2014, whereby we merged with and into our recently formed, wholly-owned Delaware subsidiary. As a result, on December 12, 2014 the closing price of our common stock, as reported on the OTCQB was $5.29.

Price Range of Common Stock

The following table shows, for the periods indicated, the high and low bid prices per share of our Common Stock as reported by the OTCQB quotation service and does not give effect to the twenty-five-for-one (25:1) reverse split of our common stock or our merger with and into our recently formed, wholly-owned Delaware subsidiary, each effected on December 3, 2014. These bid prices represent prices quoted by broker-dealers on the OTCQB quotation service. The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commissions, and may not represent actual transactions.

	High	Low
2012		
First quarter	$ 0.17	$ 0.14
Second quarter	$ 0.15	$ 0.09
Third quarter	$ 0.16	$ 0.12
Fourth quarter	$ 0.15	$ 0.11
2013		
First quarter	$ 0.15	$ 0.09
Second quarter	$ 0.15	$ 0.11
Third quarter	$ 0.13	$ 0.08
Fourth quarter	$ 0.14	$ 0.09
2014		
First quarter	$ 0.35	$ 0.12
Second quarter	$ 0.26	$ 0.20
Third quarter	$ 0.31	$ 0.20
Fourth quarter (through December 2, 2014)	$ 0.28	$ 0.20

Approximate Number of Equity Security Holders

As of November 10, 2014, there were approximately 5,200 stockholders. Because shares of our Common Stock are held by depositaries, brokers and other nominees, the number of beneficial holders of our shares is larger than the number of stockholders.

As of December 3, 2014, after giving effect to the twenty-five-for-one (25:1) reverse split of our common stock and our merger with and into our recently formed, wholly-owned Delaware subsidiary, each effected on December 3, 2014, there were approximately 5,814 stockholders. Because shares of our Common Stock are held by depositaries, brokers and other nominees, the number of beneficial holders of our shares is larger than the number of stockholders.

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Dividends

We have not declared or paid any cash dividends on our common stock, and we do not anticipate declaring or paying cash dividends for the foreseeable future. We are not subject to any legal restrictions respecting the payment of dividends, except that we may not pay dividends if the payment would render us insolvent. Any future determination as to the payment of cash dividends on our common stock will be at our board of directors discretion and will depend on our financial condition, operating results, capital requirements and other factors that our board of directors considers to be relevant.

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MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITIONS AND RESULTS OF OPERATIONS

You should read the following discussion of our operating and financial condition and prospects in conjunction with the financial statements and the notes thereto included elsewhere in this prospectus. The following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this prospectus.

Overview

We are a critical care focused immunotherapy company using blood purification to modulate inflammation with the goal of preventing or treating multiple organ failure in life-threatening illnesses. The technology is based upon biocompatible, highly porous polymer sorbent beads that are capable of extracting unwanted substances from blood and other bodily fluids. The technology is protected by 32 issued U.S. patents with multiple patent applications pending both in the United States and internationally. Our intellectual property consists of composition of matter, materials, methods of production, systems incorporating the technology and multiple medical uses with expiration dates ranging from 3 to 12 years.

In March 2011, we received E.U. regulatory approval under the CE Mark and Medical Devices Directive for our flagship product, CytoSorb®, as an extracorporeal cytokine filter indicated for use in clinical situations where cytokines are elevated. The goal of the CytoSorb® is to prevent or treat organ failure by reducing cytokine storm and the potentially deadly systemic inflammatory response syndrome in diseases such as sepsis, trauma, burn injury, acute respiratory distress syndrome, pancreatitis, liver failure, and many others. Organ failure is the leading cause of death in the intensive care unit, and remains a major unmet medical need, with little more than supportive care therapy (e.g. mechanical ventilation, dialysis, vasopressors, fluid support, etc.) as treatment options. By potentially preventing or treating organ failure, CytoSorb® may improve clinical outcome, including survival, while reducing the need for costly intensive care unit treatment, thereby potentially saving significant healthcare costs.

Our CE Mark enables CytoSorb® to be sold throughout the entire European Union. In addition, many countries outside the E.U. accept CE Mark approval for medical devices, but may also require registration with or without additional clinical studies. The broad approved indication enables CytoSorb® to be used on-label in diseases where cytokines are elevated including, but not limited to, critical illnesses such as those mentioned above, autoimmune disease flares, cancer cachexia, and many other conditions where cytokine-induced inflammation plays a detrimental role.

As part of the CE Mark approval process, we completed our randomized, controlled, European Sepsis Trial among 14 trial sites in Germany in 2011, with enrollment of 100 patients with sepsis and respiratory failure. The trial established that CytoSorb® was safe in this critically-ill population, and that it was able to control cytokine storm and broadly reduce key cytokines.

We plan to do larger, prospective studies in septic patients in the future to confirm the European Sepsis Trial findings.

In addition to CE Mark approval, CytoSorbents also achieved ISO 13485:2003 Full Quality Systems certification, an internationally recognized quality standard designed to ensure that medical device manufacturers have the necessary comprehensive management systems in place to safely design, develop, manufacture and distribute medical devices in the European Union. CytoSorbents manufactures CytoSorb® at its manufacturing facilities in New Jersey for sale in the E.U. and for additional clinical studies. We also established a reimbursement path for CytoSorb® in Germany and Austria.

From September 2011 through June 2012, we began a controlled market release of CytoSorb® in select geographic territories in Germany with the primary goal of preparing for commercialization of CytoSorb® in Germany in terms of manufacturing, reimbursement, logistics, infrastructure, marketing, contacts, and other key issues.

In late June 2012, following the establishment of our European subsidiary, CytoSorbents Europe GmbH, CytoSorbents began the commercial launch of CytoSorb® in Germany with the hiring of Dr. Christian Steiner as Vice President of Sales and Marketing and three additional sales representatives who joined us and

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completed their sales training in Q3 2012. The fourth quarter of 2012 represented the first full quarter of direct sales with the full sales team in place. During this period, we expanded our direct sales efforts to include both Austria and Switzerland. At the end of Q1 2014, we had more than 100 key opinion leaders, or KOLs, in critical care, cardiac surgery, and blood purification who were either using CytoSorb® or committed to using CytoSorb® in the near future.

In addition, we now have more than 40 investigator initiated studies being planned in Germany, Austria, and the United Kingdom in multiple applications including sepsis, cardiac surgery, lung injury, trauma, pancreatitis, liver failure, kidney failure, and others, with many already enrolling patients. These studies are being supported by our European Director of Scientific Affairs. As of September 30, 2014, our sales force includes seven direct sales people and two sales support staff. We intend to add more staff to the direct sales and marketing team in the future.

We have complemented our direct sales efforts with sales to distributors and/or corporate partners. In 2013, we reached agreement with distributors in the United Kingdom, Ireland, Turkey, Russia, and the Netherlands. In September 2013, we entered into a strategic partnership with Biocon Ltd., Asia s largest biotech company with an initial distribution agreement for India and select emerging markets, under which Biocon will have the exclusive commercialization rights for CytoSorb®. In April, 2014, we announced distribution of CytoSorb® in the Middle East, including Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, Bahrain, and Oman (the Gulf Cooperation Council or GCC) and Yemen, Iraq, and Jordan through an exclusive agreement with Techno Orbits. In August 2014, the Company announced distribution in Taiwan with Hemoscien Corporation. We are currently evaluating other potential distributor networks in other major countries where we are either approved to market the device or where CE Mark approval is accepted.

We are currently conducting a dose ranging trial in Germany among eight clinical trial sites to evaluate the safety and efficacy of CytoSorb® when used for longer periods of time. Data from this dosing study is intended to help clinicians with additional treatment options for CytoSorb®, help support the positive clinical data from our first European Sepsis Trial, and help shape the trial protocol for a U.S. based pivotal study. In addition, we will receive additional data from the results of more than forty investigator-initiated studies in Europe which are either currently underway or planned.

Concurrent with our commercialization plans, we intend to conduct or support additional clinical studies in sepsis, cardiac surgery, and other critical care diseases to generate additional clinical data to expend the scope of clinical experience for marketing purposes, to increase the number of treated patients, and to support potential future publications. We are currently organizing a pivotal trial in the U.S. using CytoSorb® during cardiac surgury that is intended to be the basis of our application seeking U.S. regulatory approval.

The market focus for CytoSorb® is the prevention or treatment of organ failure in life-threatening conditions, including commonly seen illnesses in the intensive care unit such as infection and sepsis, trauma, burn injury, acute respiratory distress syndrome, or ARDS, and others. Sepsis is a major unmet medical need with no approved products in the U.S. or Europe to treat it. As with other critical care illnesses, multiple organ failure is the primary cause of death in sepsis. When used with standard of care therapy, that includes antibiotics, the goal of CytoSorb® in sepsis is to reduce excessive levels of cytokines and other inflammatory toxins, to help reduce the severe inflammatory response syndrome, or SIRS, response and either prevent or treat organ failure.

In addition to the sepsis indication, we intend to continue to foster research in other critical care illnesses where CytoSorb® could be used, such as ARDS, trauma, severe burn injury and acute pancreatitis, or in other acute conditions that may benefit by the reduction of cytokines in the bloodstream. Some examples include the prevention of post-operative complications of cardiac surgery (cardiopulmonary bypass surgery) and damage to organs donated for transplant prior to organ harvest.

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Our proprietary hemocompatible porous polymer bead technology forms the basis of a broad technology portfolio. Some of our products include:

CytoSorb® an extracorporeal hemoperfusion cartridge approved in the E.U. for cytokine removal, with the goal of reducing SIRS and preventing or treating organ failure.
HemoDefend™ a development-stage blood purification technology designed to remove contaminants in blood transfusion products. The goal is to reduce transfusion reactions and improve the safety of older blood.
ContrastSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove IV contrast from the blood of high risk patients undergoing CT imaging with contrast, or interventional radiology procedures such as cardiac catheterization. The goal is to prevent contrast-induced nephropathy.
DrugSorb a development-stage extracorporeal hemoperfusion cartridge designed to remove toxic chemicals from the blood (e.g. drug overdose, high dose regional chemotherapy, etc.).
BetaSorb™ a development-stage extracorporeal hemoperfusion cartridge designed to remove mid-molecular weight toxins, such as b2-microglobulin, that standard high-flux dialysis cannot remove effectively. The goal is to improve the efficacy of dialysis or hemofiltration.

We have been successful in obtaining technology development contracts and support from agencies in the U.S. Department of Defense, including DARPA, the U.S. Army, and the U.S. Air Force.

In September 2013, the National Heart, Lung, and Blood Institute (NHLBI), a division of the National Institutes of Health (NIH), awarded us a Phase I Small Business Innovation Research (SBIR) contract to further advance our HemoDefend™ blood purification technology for RBC transfusions. The project, entitled Elimination of blood contaminants from pRBCs using HemoDefend™ hemocompatible porous polymer beads, was $203,351 over six months. The overall goal of the program was to reduce the risk of potential side effects of blood transfusions, and help to extend the useful life of pRBCs.

In June 2013, we announced that the U.S. Air Force will fund a 30 patient, single site, randomized controlled human pilot study in the United States amongst trauma patients with rhabdomyolysis most commonly associated with trauma. The FDA has approved our Investigational Device Exemption (IDE) application for this study, and the study began in April 2014.

In June 2013, we began work on our previously announced $1 million Phase II SBIR U.S. Army contract to further develop our technology for the treatment of burn injury and trauma in animal models. This work is supported by the U.S. Army Medical Research and Material Command under an amendment to Contract W81XWH-12-C-0038 and has now received committed funding of $1.15 million to date.

In August 2012, we were awarded a $3.8 million contract by the Defense Advanced Research Projects Agency (DARPA) for our Dialysis-Like Therapeutics program to treat sepsis. DARPA has been instrumental in funding many of the major technological and medical advances since its inception in 1958, including development of the Internet, the GPS, and robotic surgery. The DLT program in sepsis seeks to develop a therapeutic blood purification device that is capable of identifying the cause of sepsis (e.g., cytokines, toxins, pathogens, activated cells) and remove these substances in an intelligent, automated, and efficient manner. Our contract is for advanced technology development of our hemocompatible porous polymer technologies to remove cytokines and a number of pathogen and biowarfare toxins from blood. We are in Year 2 of the program and are currently working with the recently announced systems integrator, Battelle Laboratories, and its subcontractor NxStage Medical, who are responsible for integrating the technology developed by us and others into a final medical device design prototype, and evaluating this device in septic animals and eventually in human clinical trials in sepsis. Our work is supported by DARPA and SSC Pacific under Contract No. N66001-12-C-4199.

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Results of Operations

Comparison for the nine months ended September 30, 2014 and 2013:

Revenues:

For the nine months ended September 30, 2014, we generated revenue of approximately $3,249,000 as compared to revenues of approximately $1,544,000, for the nine months ended September 30, 2013, an increase of approximately $1,424,000 or 110%. Revenue from product sales was approximately $2,264,000 in the nine months ended September 30, 2014, as compared to approximately $508,000 in the nine months ended September 30, 2014, an increase approximately $1,756,000 or 346%. This increase in sales is a result of the efforts of our four person sales team which was established in August 2012 and was expanded in 2014 to seven people, as well as sales to distributors in other parts of Europe and elsewhere in the world.

Cost of Revenues:

For the nine months ended September 30, 2014 and 2013, cost of revenue was approximately $1,805,000 and $1,074,000, respectively. The increase is due to increased sales and expenditures related to progress on grant objectives.

Overall blended gross margins were approximately 44%, with product gross margins of approximately 66% for the nine months ended September 30, 2014.

***Research and Development Expenses**:*

For the nine months ended September 30, 2014, research and development expenses were approximately $1,464,000, as compared to research and development expenses of approximately $1,706,000 for the nine months ended September 30, 2013. The decrease of approximately $242,000 in research and development expenses was primarily due to an increase of $257,000 in grant costs included in costs of revenue, decreases in consulting costs of approximately $68,000, a change in the classification of approximately $170,000 of salaries from research and development expenses in 2013 to selling, general and administrative expenses in 2014 as a result of a change in the duties of an executive of the Company, and decreases in patent expenses of approximately $62,000, all of which were offset by increased costs for clinical studies and license fees of approximately $309,000.

Legal, Financial and Other Consulting Expense:

Legal, financial and other consulting expenses were approximately $733,000 for the nine months ended September 30, 2014, as compared to approximately $570,000 for the nine months ended September 30, 2013. The increase of approximately $203,000 was due to an increase in fees to consultants, fees to secure certain key employees, and fees to consultants for investor relations and other advisory services.

Selling, General and Administrative Expense:

Selling, general and administrative expenses were approximately $3,471,000 for the nine months ended September 30, 2014 as compared to approximately $1,902,000 for the nine months ending September 30, 2013. The increase of approximately $1,568,000 in selling, general, and administrative expenses was primarily due to a change in

classification of approximately $170,000 of payroll costs from research and development expenses to selling, general and administrative expenses, other increases in payroll, commissions and employee-related expenses of approximately $674,000, increased royalties of approximately $93,000, increases in advertising and marketing costs of approximately $173,000, increased costs of medical conference and congresses of approximately $187,000, increased loss on foreign exchange of approximately $141,000 and increases in stock option costs of approximately $129,000.

Interest Expense:

For the nine months ended September 30, 2014, interest expense was approximately $311,000, as compared to interest expense of approximately $300,000 for the nine months ended September 30, 2013. The increase was principally due to the interest payable and amortization of financing costs related to the convertible notes.

Change in Warrant Liability:

We recognize warrants as liabilities at their fair value on the date of the grant because of price adjustment provisions in the warrants, then measure the fair value of the warrants on each reporting date, and records a

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change to the warrant liability as appropriate. The change in warrant liability was approximately $208,000 and $-0- for the nine months ended September 30, 2014 and 2013, respectively. The change in warrant liability was as a result of the change in the fair value of the warrant liability from March 11, 2014 (the date of our $10,200,000 2014 offering) to September 30, 2014. There was no warrant liability in 2013, and therefore there was no change in warrant expense in 2013.

History of Operating Losses:

We have experienced substantial operating losses since inception. As of September 30, 2014, we had an accumulated deficit of approximately $113,903,000, which included losses of approximately $4,327,000 and $4,009,000 for the nine month periods ended September 30, 2014 and 2013, respectively. Historically, losses have resulted principally from costs incurred in the research and development of our polymer technology, clinical studies, and general and administrative expenses.

Comparison for the three months ended September 30, 2014 and 2013:

Revenues:

For the three months ended September 30, 2014, we generated revenues of approximately $1,162,000 as compared to revenues of approximately $881,000 for the three months ended September 30, 2013. Product revenues were approximately $1,032,000 for the quarter ended September 30, 2014, as compared to product revenues of $204,000 for the quarter ended September 30, 2013. This $828,000 or approximately 406% increase in product revenues was a result of our direct sales effort to hospitals in Germany, Austria and Switzerland which began in 2012, as well as sales to distributors in Europe and elsewhere in the world. Additionally, grant revenue and other income was approximately $131,000 and $677,000 for the three month periods ended September 30, 2014 and 2013, respectively.

Cost of Revenues:

For the three months ended September 30, 2014, cost of revenue was approximately $476,000 as compared to cost of revenue of approximately $621,000 for the three months ended September 30, 2013. The decrease in cost of revenues is due to decreases in grant expenditures, which were partially offset by a increases in the cost of sales related to product sales. For the quarter ended September 30, 2014, overall blended gross margins were approximately 59%, with product gross margins of approximately 65%.

***Research and Development Expenses**:*

For the three months ending September 30, 2014, research and development costs were approximately $880,000, as compared to research and development costs of approximately $294,000 for the three months ended September 30, 2013. The increase of approximately $586,000 was primarily due to increases in research and development costs not offset by grant income of approximately $422,000 and increased costs for clinical studies of approximately $164,000.

Legal, Financial and Other Consulting Expense:

Legal, financial and other consulting costs were approximately $183,000 for the three months ending September 30, 2014, as compared to legal financial and other consulting costs of approximately $158,000 for the three months ended September 30, 2013. This increase of approximately $25,000 was primarily due to increased recruitment and other

consulting fees.

Selling, General and Administrative Expense:

Selling, general and administrative expenses were approximately $1,310,000 for the three months ended September 30, 2014, compared to approximately $688,000 for the three months ended September 30, 2013, an increase of approximately $622,000. This was primarily due to increases in payroll related costs of approximately $262,000, advertising and marketing costs of approximately $115,000, increased royalties due to increased sales of approximately $50,000, increased loss on foreign exchange of approximately $139,000 and increases in medical conference and congresses expenses of approximately $42,000.

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Interest (Income)/Expense Net:

For the three months ended September 30, 2014, our net interest expense was approximately $47,000, as compared to net interest expense of approximately $85,000 for the three months ended September 30, 2013. The decrease in net interest expense is primarily due to interest and amortization of financing costs related to convertible notes.

Change in Warrant Liability:

The change in warrant liability was approximately $235,000 and $-0- for the three months ended September 30, 2014 and 2013, respectively. The change in warrant liability was as a result of the change in the fair value of the warrant liability from June 30, 2014 to September 30, 2014. There was no warrant liability in 2013, and therefore there was no change in warrant expense in 2013.

Comparison of the year ended December 31, 2013 and 2012

Revenues

For the year ended December 31, 2013, we generated revenue of approximately $2,423,000 as compared to revenues of approximately $1,343,000 for the year ended December 31, 2012, an increase of 80%. Revenue from product sales was approximately $822,000 for the year ended December 31, 2013, as compared to approximately $152,000 in the year ended December 31, 2012, an increase of 441%. Fourth quarter 2013 product sales of CytoSorb® were approximately $314,000, an increase of 54% over third quarter 2013 product sales. This increase in sales is the result of the efforts of our direct sales force covering Germany, Austria, and Switzerland, as well as sales to distributors in other parts of Europe and the Middle East.

Another approximately $37,000 in revenues related to orders completed during the fourth quarter of 2013 was recognized in 2014. Due to common carrier delays, the products were not picked up until January 2, 2014. Our revenue recognition policies require that we recognize revenue on products at the time when title and risk of loss passes to the customer, which occurs when the products are picked up by common carrier.

Product gross margins were approximately 61% for the year ended December 31, 2013.

Revenue from grants was approximately $1,601,000, as compared to approximately $1,191,000 in the year ended December 31, 2012.

Research and Development Expenses

Our research and development costs were, approximately $1,739,000 and $2,532,000, for the years ended December 31, 2013 and 2012 respectively. The decrease of approximately $793,000 in research and development expenditures is directly related to an increase in 2013 of direct labor and other costs being deployed toward grant-funded activities, which has the effect of reducing the amount of our non-reimbursable research and development costs.

Legal, Financial and Other Consulting Expenses

Our legal, financial and other consulting costs were, approximately $908,000 and $627,000, for the years ended December 31, 2013 and 2012 respectively. In 2013, legal, financial, and other consulting costs increased by

approximately $281,000, or approximately 44.8%. This is primarily comprised of an increase in legal fees of approximately $45,000 associated with international contracts with product distributors and certain improvements in our compliance documents, approximately $52,000 in accounting fees which were associated with our audit services, S-1 registration related fees, and other reports, approximately $70,000 associated with accounting consultants and temporary services, approximately $88,000 in consulting fees related to new systems and employment related fees of approximately $27,000 incurred to secure specialized executive talent.

General and Administrative Expenses

Our general and administrative costs were approximately $2,577,000 for the year ended December 31, 2013, an increase of approximately $1,222,000 over general and administrative costs of approximately $1,355,000 for the year ended December 31, 2012. The increase in selling, general, and administrative expenses was

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primarily due to the addition of our German-based sales and support team resulting in direct costs increases of $430,000, increases in advertising and marketing costs of approximately $290,000, increases in option expenses of $294,000, increase in royalty expenses of approximately $38,000, and increases in consulting costs of $70,000.

Interest Expenses

For the year ended December 31, 2013, our net interest expense was approximately $423,000, as compared to interest expenses of approximately $564,000 for the year ended December 31, 2012. This decrease was principally due to lower amortization of debt discount charged to interest expense in 2013.

Benefit from Income Taxes

Our benefit from income taxes was approximately $458,000 and $392,000 for the years ended December 31, 2013 and 2012, respectively. These benefits were realized by utilizing the New Jersey Technology Business Tax Certificate Transfer Program whereby we sold our net operating losses to the State of New Jersey.

We have experienced substantial operating losses since inception. As of December 31, 2013, we had a deficit accumulated during the development stage of approximately $105,806,000, which included losses of approximately $4,678,000 and $3,664,000 for years ended December 31, 2013 and 2012 respectively. Historically, our losses have resulted principally from costs incurred in the research and development of our polymer technology, and general and administrative expenses, which together were $4,316,000 and $3,887,000 for the years ended December 31, 2013 and 2012 respectively.

Liquidity and Capital Resources

Since inception, our operations have been primarily financed through the private placement of its debt and equity securities. At September 30, 2014, we had current assets of approximately $8,954,000, including cash on hand and short-term investments of approximately $7,780,000 and current liabilities of approximately $1,549,000. We believe we have sufficient cash to fund its operations into 2016; however, we may need to raise additional capital to fully fund pivotal trials in the U.S. and/or Germany. We will be better able to assess this need once the specific protocols are finalized with appropriate regulatory bodies. In addition, we may require additional capital to support our sales and marketing efforts, to fund clinical studies, for expansion of our production capacity, to further develop our products, and for general working capital purposes.

Effects of Recent Accounting Pronouncements

Accounting Standards Update (ASU) 2014-10, which for public business entities will be effective for annual reporting periods beginning after December 15, 2014 and interim periods therein, removes the definition of a development stage entity from the Accounting Standards Codification, thereby eliminating the financial reporting distinction between development stage entities from U.S. GAAP. Specifically eliminated are the requirements to (1) present inception-to-date information in the statements of income, cash flows, and shareholder equity, (2) label the financial statements as those of a development stage entity, (3) disclose a description of the development stage activities in which the entity is engaged, and (4) disclose in the first year in which the entity is no longer a development state entity that in prior years it had been in the development stage. The Company has adopted ASU 2014-10 within its September 30, 2014 financial statements.

In May 2014, the Financial Account Standards Board (FASB) issued ASU 2014-09, Revenue with Contracts from Customers. ASU 2014-09 supercedes the current revenue recognition guidance, including industry-specific guidance. The ASU introduces a five-step model to achieve its core principal of the entity recognizing revenue to depict the transfer of goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods and services. The updated guidance is effective for interim and annual periods beginning after December 15, 2016 and early adoption is not permitted. The Company is currently evaluating the impact of the updated guidance, but the Company does not believe that the adoption of ASU 2014-09 will have a significant impact on its consolidated financial statements.

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Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. We believe the following critical accounting policies have significant effect in the preparation of our consolidated financial statements.

Patents

Legal costs incurred to establish patents are capitalized. When patents are issued, capitalized costs are amortized on the straight-line method over the related patent term. In the event a patent is abandoned, the net book value of the patent is written off.

Revenue Recognition

Product Sales: Revenues from sales of products are recognized at the time of delivery when title and risk of loss passes to the customer. Recognition of revenue also requires reasonable assurance of collection of sales proceeds and completion of all performance obligations.

Grant Revenue: Revenue from grant income is based on contractual agreements. Certain agreements provide for reimbursement of costs, while other agreements provide for reimbursement of costs and an overhead margin. Revenues are recognized when milestones have been achieved and revenues have been earned. Costs are recorded as incurred. Costs subject to reimbursement by these grants have been reflected as costs of revenue.

Deferred Revenue: We defer revenue that have been received but not yet earned on government contracts. This revenue will be recognized as income in the period in which the revenue is earned. All deferred revenue is expected to be earned within a one year of the balance sheet date.

Research and Development

All research and development costs, payments to laboratories and research consultants are expensed when incurred.

Stock Based-Compensation

We account for stock-based compensation under the recognition requirements of accounting standards for accounting for stock-based compensation, for employees and directors whereby each option granted is valued at fair market value on the date of grant. Under these accounting standards, the fair value of each option is estimated on the date of grant using the Black-Scholes option pricing model.

We also follow the guidance of accounting standards for accounting for equity instruments that are issued to other than employees for acquiring, or in conjunction with selling, goods or services for equity instruments issued to consultants.

Determination of Fair Value for Stock Dividend and Stock Based Compensation

Effective January 1, 2010, we have changed our basis for estimating the fair value of the preferred stock dividends from the underlying conversion prices of the Series A and Series B Preferred Stock, to a five day volume weighted average price of actual closing market prices for our common stock. We believe that there has been relative improvement in stock trading volumes of our common stock and that this new market based methodology is a better proxy for fair valuation of its preferred stock dividends.

Conversion of Redeemable Series B Convertible Preferred Stock

Upon conversions of our Redeemable Series B Convertible Preferred Stock into shares of common stock, we reduce the Series B Preferred Stock carrying value based on the original issuance price of approximately $103 per share on a first-in first-out basis and reclassifies the amount into additional paid-in capital.

Off-balance Sheet Arrangements

We have no off-balance sheet arrangements.

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Going Concern

The accompanying consolidated 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. The Company has experienced negative cash flows from operations since inception and has an accumulated deficit at September 30, 2014 of approximately $113,902,000. While the Company s revenues are increasing, it remains dependent on the proceeds of present and future offerings to fund its research, development and commercialization program. The Company currently has adequate funding for more than the next twelve months of operations; however, it may have to raise additional capital to fund future operations and/or clinical trials. Although the Company has historically been successful in raising additional capital through equity and debt offerings, there can be no assurance that the Company will be successful in raising additional capital in the future or that it will be on favorable terms. Furthermore, if the Company is successful in raising the additional offering, there can be no assurance that the amount will be sufficient to complete the Company s plans. These matters raise substantial doubt about the Company s ability to continue as a going concern. These consolidated financial statements do not include any adjustments related to the outcome of this uncertainty.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There have been no changes in or disagreements with our accountants on accounting or financial disclosure matters.

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DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth our directors and executive officers, their ages and the positions they hold:

Name	Age	Position
Phillip Chan, MD, PhD	44	President and Chief Executive Officer, Director
Al W. Kraus	69	Chairman of the Board
Edward R. Jones, MD, MBA	65	Director
James Gunton	47	Director
Alan D. Sobel	53	Director
Vincent Capponi	56	Chief Operating Officer
Kathleen Bloch	59	Chief Financial Officer
Robert Bartlett, MD	74	Chief Medical Officer

Phillip Chan, MD, PhD. Dr. Chan became a director of the Company in 2008 and since January 2009 is also Chief Executive Officer. Prior to CytoSorbents, Dr. Chan led healthcare and life science investments as Partner for the NJTC Investment Fund. Dr. Chan co-founded Andrew Technologies, a medical device company commercializing its HydraSolve™ lipoplasty system for plastic surgery. He is a Board-certified Internal Medicine physician with a strong background in clinical medicine and research. Dr. Chan received his MD and PhD from the Yale University School of Medicine and completed his Internal Medicine residency at Beth Israel Deaconess Medical Center at Harvard. He also holds a BS in cell and molecular biology from Cornell University.

Al Kraus. Mr. Kraus has been a director of the Company since 2003 and up until the end of 2008 was the Company s President and CEO. Mr. Kraus currently serves as Chairman of the Board of Directors. Mr. Kraus has more than twenty-five years experience managing companies in the dialysis, medical device products, personal computer and custom software industries. Prior to joining us, from 2001 to 2003, Mr. Kraus was President and CEO of NovoVascular Inc., an early stage company developing coated stent technology. From 1996 to 1998, Mr. Kraus was President and CEO of Althin Healthcare and from 1998 to 2000, of Althin Medical Inc., a manufacturer of products for the treatment of end stage renal disease. While CEO of Althin, he provided strategic direction and management for operations throughout the Americas. From 1979 to 1985, Mr. Kraus was U.S. Subsidiary Manager and Chief Operating Officer of Gambro Inc., a leading medical technology and healthcare company. Mr. Kraus was the Chief Operating Officer of Gambro when it went public in the United States in an offering led by Morgan Stanley.

Edward R. Jones, MD, MBA. Dr. Jones has been a director of the Company since April 2007. Dr. Jones is an attending physician at the Albert Einstein Medical Center and Chestnut Hill Hospital as well as Clinical Professor of Medicine at Temple University Hospital. Dr. Jones has published or contributed to the publishing of 30 chapters, articles, and abstracts on the subject of treating kidney-related illnesses. He is a sixteen-year member of the Renal Physicians Association, the Philadelphia County Medical Society and a past board member of the National Kidney Foundation of the Delaware Valley. Dr. Jones is a past President of the Renal Physicians Association.

James Gunton, MBA. Mr. Gunton became a director of the Company in 2008. He is a cofounder of the NJTC Investment Fund. Mr. Gunton has been investing in privately-held growth technology companies for fifteen years. Before co-founding in 2001 the $80 million NJTC Investment Fund, Jim was a manager at Oracle Corporation in the Silicon Valley. He represents NJTC Investment Fund at nine portfolio companies and is a former Governor of the National Association of Small Business Investment Companies. Jim earned a BS from Stanford University and an

MBA with distinction from Duke University.

Alan D. Sobel, CPA. Mr. Sobel has been a director of the Company since November 2014. Since 1994, Mr. Sobel has served as the Managing Member of Sobel & Co., LLC, a full-service accounting, auditing, taxation, and business consulting firm. He has provided corporate advisory and consulting services, including mergers and acquisitions, for clients in the real estate, manufacturing, pharmaceutical, and distribution businesses, among others. Mr. Sobel is a Certified Public Accountant, and has served in various leadership

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roles including Chairman of the Audit Committee of the New Jersey Society of Certified Public Accountants. He earned a BS in Accountancy from Bentley College and a MS in Taxation from Fairleigh Dickinson University.

Vincent Capponi, MS. Mr. Capponi joined the Company as Vice President of Operations in 2002 and became its Chief Operating Officer in July 2005. He has more than 20 years of management experience in medical device, pharmaceutical and imaging equipment at companies including Upjohn, Sims Deltec and Sabratek. Prior to joining CytoSorbents in 2002, Mr. Capponi held several senior management positions at Sabratek and its diagnostics division GDS, and was interim president of GDS diagnostics in 2001. From 1998 to 2000, Mr. Capponi was Senior Vice President and Chief Operating Officer for Sabratek and Vice President Operations from 1996 to 1998. He received his MS in Chemistry and his BS in Chemistry and Microbiology from Bowling Green State University.

Ronald Berger, CPA. Mr. Berger has been a financial consultant to the Company since 2005 and became Interim Chief Financial Officer in 2012 upon the departure of the previous CFO. He has over 40 years of business experience and has been a financial consultant to various Companies during the past 20 years. Prior to that he was Controller for Singer Supermarkets and VP Finance and Administration for Quick Chek Corporation. His appointment to Interim Chief Financial Officer terminated with the commencement of employment of Kathleen P. Bloch.

Kathleen P. Bloch, MBA, CPA. Ms. Bloch has more than 20 years of executive financial experience in both public and private companies. She replaced Interim CFO, Mr. Ronald Berger, effective May 29, 2013. Most recently, she was Chief Financial Officer of Laureate Biopharmaceutical Services, Inc., a leader in biopharmaceutical contract development and manufacturing. Previously, Ms. Bloch was Chief Operating Officer and CFO of PC Group, Inc., a $70 million in revenue, NASDAQ-listed, publicly traded company with a diverse group of holdings, including several medical device subsidiaries. Prior to that, Ms. Bloch was CFO of Silver Line Building Products Corporation, one of the world s largest manufacturer of vinyl windows. Previously, Ms. Bloch was CFO of ERD Waste Corporation, a NASDAQ-listed, publicly-traded environmental services provider, operating in 16 states with more than $60 million in sales. She began her career at the accounting firm of Peat Marwick International. Ms. Bloch holds a Master of Business Administration degree and a Bachelor of Science Accounting degree from LaSalle University, and is a Certified Public Accountant.

Robert Bartlett, MD. Dr. Bartlett became our Chief Medical Officer in January 2009. He is Professor Emeritus of Surgery at the University of Michigan Health System. Prior to becoming Professor Emeritus in 2005, Dr. Bartlett was Director of the Surgical Intensive Care Unit, Chief of the Trauma/Clinical Care Division and Director of the Extracorporeal Life Support Program at the University of Michigan Medical Center. Dr. Bartlett was the pioneer in the development of the extracorporeal membrane oxygenation machine (ECMO), used to oxygenate blood in critically ill patients worldwide. He received his MD from the University of Michigan Medical School, cum laude. He completed his general surgery residency at Peter Bent Brigham Hospital in Boston, and was Chief resident in thoracic surgery. Dr. Bartlett was also a NIH Trainee in Academic Surgery at Harvard Medical School, and was previously faculty at the University of California, Irvine. Dr. Bartlett is the recipient of 26 separate research grants, 14 from the National Institute of Health, including an RO1 grant for the development of a totally artificial lung. He has also received numerous national and international awards for his contributions to critical care medicine.

Audit Committee Financial Expert

On November 11, 2014, our Board of Directors, upon the recommendation of a majority of the independent directors of the Board of Directors, unanimously appointed Alan D. Sobel to serve as a member of the Board of Directors, effective November 13, 2014. The Board also appointed Mr. Sobel to serve as Chairperson of the newly formed Nominating and Corporate Governance Committee of the Board and to serve as Chairperson of the newly formed

Audit Committee of the Board. The Audit Committee of the Board is comprised of three directors, all of which meet independence standards set forth in NASDAQ Marketplace Rule 4200(a)(15). The Board of Directors have determined that Mr. Sobel qualifies as an audit committee financial expert, as such term is defined by Item 4.07(d)(5) of Regulation S-K as promulgated by the Securities and Exchange Commission.

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Code of Business Conduct and Ethics

In October, 2013, the Company adopted a Code of Business Conduct and Ethics. All CytoSorbents employees, including our Chief Executive Officer and other senior executives, are required to comply with the Code of Business Conduct and Ethics to help ensure that our business is conducted in accordance with the highest standards of ethical behavior. Our Code of Conduct covers all areas of professional conduct, including customer relationships, conflicts of interest, insider trading, intellectual property and confidential information, as well as requiring strict adherence to all laws and regulations applicable to our business. Employees are required to bring any violations and suspected violations of the Code of Conduct to the attention of the Company, through management, the Board of Directors, or our legal counsel. At the current time, the Code of Business Conduct has been signed by all employees in the United States and is being translated into German. Upon completion of the translation, we will secure the signatures of our Germany-based employees.

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EXECUTIVE COMPENSATION

The following summary compensation table sets forth all compensation awarded to, earned by, or paid to the named executive officers paid by us during the periods ended December 31, 2013 and 2012. All disclosures have been updated to give effect to the reverse stock split which occurred on December 3, 2014.

Summary Compensation Table

The following table shows for the fiscal years ended December 31, 2013 and 2012, compensation awarded to or paid to, or earned by, our Chief Executive Officer, our Chief Operating Officer, our Chief Financial Officer, and our Chief Medical Officer (the Named Executive Officers).

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards[1] ($)	All Other Compensation	Total ($)
Phillip Chan	2013	245,368 [2]	-0-	-0-	-0-	245,368
Chief Executive Officer	2012	231,496	-0-	-0-	8,000	239,496
Vincent Capponi,	2013	222,445 [3]	200	-0-	-0-	239,645
Chief Operating Officer	2012	219,674	30,200	-0-	-0-	249,874
Kathleen P. Bloch,	2013	118,974	-0-	5,375 [4]	-0-	124,549
Chief Financial Officer[5]	2012	-0-	-0-	-0-	-0-	-0-
David Lamadrid	2013	-0-	-0-	-0-	-0-	-0-
Chief Financial Officer[5]	2012	108,706	-0-	-0-	-0-	108,706
Ronald Berger	2013	-0-	200	9,800 [6]	100,526	110,526
Interim Chief Financial Officer[5]	2012	-0-	200	1,030 [7]	102,472	103,702
Dr. Robert Bartlett	2013	-0-	-0-	-0-	52,000	52,000
Chief Medical Officer	2012	-0-	-0-	-0-	52,000	52,000

(1) The value of option awards granted to the Named Executive Officers has been estimated pursuant to recognition requirements of accounting standards for accounting for stock-based compensation for the options described in the footnotes below, except that for purposes of this table, we have assumed that none of the options will be forfeited. The Named Executive Officers will not realize the estimated value of these awards in cash until these awards are vested and exercised or sold. For information regarding our valuation of option awards, see Stock-Based Compensation in Note 2 of our financial statements for the period ended December 31, 2013.

(2) Dr. Chan s salary for 2013 was $245,368, of which he deferred payment on $11,575 until 2014.

(3) Mr. Capponi s salary for 2013 was $239,445, of which he deferred payment on $16,476 until 2014.

(4) In connection with her employment, Ms. Bloch received options to purchase 40,000 shares on May 29, 2013 at an exercise price of $2.90. These options vest as follows: (1) 20,000 on May 9, 2014; and (2) 20,000 on May 9, 2015 and expire on May 29, 2023.

(5) Mr. Lamadrid resigned as our Chief Financial Officer effective July 11, 2012. Mr. Berger assumed the position of Interim CFO on July 12, 2012. On May 29, 2013, Ms. Bloch became Chief Financial Officer. Her annual salary is $200,000.

(6) On February 6, 2013, Mr. Berger received options to purchase 14,000 shares of stock at an exercise price of $2.65. These options vested on February 6, 2013, and expire five years from the date of issuance.

(7) On January 18, 2012, Mr. Berger received options to purchase 1,200 shares of stock at an exercise price of $4.20. Twenty (20) percent of the options vested immediately upon issuance and the remainder vest evenly over five

years and expire in five years.

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Outstanding Equity Awards at Fiscal Year End

The following table shows for the fiscal year ended December 31, 2013, certain information regarding outstanding equity awards at fiscal year-end for the Named Executive Officers.

Outstanding Equity Awards At December 31, 2013

Name	Option Awards Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)		Option Expiration Date
Phillip Chan	600		2.000	(1)	12/31/18
	100,155		2.100	(1)	1/8/19
	16,000	4,000	4.325	(2)	1/4/20
	89,100		3.450	(1)	5/5/20
		66,000	2.875	(3)	4/4/23
Vincent Capponi	2,000		41.25	(1)	12/31/16
	44,000		6.25	(1)	01/16/18
	88,000		0.875	(1)	06/25/18
	16,000		4.200	(1)	01/28/19
	16,000	4,000	4.325	(2)	1/4/20
	81,300		3.450	(1)	5/5/20
		62,000	2.875	(4)	4/4/23
Kathleen P. Bloch	0	40,000	2.900	(5)	5/7/23
		20,000	2.875	(6)	4/4/23
Robert Bartlett	2,000		2.100	(1)	01/08/14
	5,600	140	4.325	(7)	1/4/20
	20,600		3.450	(1)	5/5/20
		16,000	2.875	(8)	4/4/23

(1) Fully vested.

(2) Vests and becomes exercisable as to (i) 4,000 shares on January 4, 2010; (ii) 4,000 shares on January 4, 2011; (iii) 4,000 shares on January 4, 2012; (iv) 4,000 shares on January 4, 2013; and (v) 4,000 shares on January 4, 2014.

(3) These options will become exercisable based on the achievement of certain milestones connected to the Company s operations, subject to approval by the Board of Directors. In March 2014 the Board of Directors reviewed the milestones achieved, and determined that Dr. Chan earned 30,500 of the milestone options which vest and become exercisable as to (i) 15,250 on December 31, 2014; and (ii) 15,250 on December 31, 2015. The remaining 35,500 options were cancelled.

(4) These options will become exercisable based on the achievement of certain milestones connected to the Company s operations, subject to approval by the Board of Directors. In March 2014 the Board of Directors reviewed the milestones achieved, and determined that Mr. Capponi earned 30,000 of the milestone options which vest and become exercisable as to (i) 15,000 on December 31, 2014; and (ii) 15,000 on December 31, 2015. The remaining

32,000 options were cancelled.

(5) Vests and becomes exercisable as to (1) 20,000 shares on May 9, 2014; and (ii) 20,000 shares on May 9, 2015.

(6) These options will become exercisable based on the achievement of certain milestones connected to the Company s operations, subject to approval by the Board of Directors. In March 2014 the Board of Directors reviewed the milestones achieved, and determined that Ms. Bloch earned 20,000 of the milestone options which vests and becomes exercisable as to (i) 10,000 on December 31, 2014; and (ii) 10,000 on December 31, 2015.

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(7) Vests and becomes exercisable as to (i) 1,400 shares on January 4, 2010; (ii) 1,400 shares on January 4, 2011; (iii) 1,400 shares on January 4, 2012; (iv) 1,400 shares on January 4, 2013; and (v) 1,400 shares on January 4, 2014.

(8) These options will become exercisable based on the achievement of certain milestones connected to the Company s operations, subject to approval by the Board of Directors. In March, 2014, based upon milestones achieved, the Board awarded Dr. Bartlett 8,000 of the milestone options which vests and becomes exercisable as to (i) 4,000 on December 31, 2014; and (ii) 4,000 on December 31, 2015.

Director Compensation

The following table shows for the fiscal year ended December 31, 2013 certain information with respect to the compensation of all non-employee directors of the Company.

Director Compensation for Fiscal 2013

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)	Total ($)
Joseph Rubin(2)	8,500	1,125 (2)	9,625
Edward R. Jones(3)	10,000	1,125 (3)	11,125
James Gunton(4)		1,125 (4)	1,125
Al Kraus(5)	25,000	2,250 (5)	27,250
Phillip Chan(6)		(6)	

(1) The value of option awards granted to directors has been estimated pursuant to the recognition requirements of accounting standards for accounting for stock-based compensation for the options described in the footnotes below, except that for purposes of this table, we have assumed that none of the options will be forfeited. The directors will not realize the estimated value of these awards in cash until these awards are vested and exercised or sold. For information regarding our valuation of option awards, see Stock-Based Compensation in Note 2 of our financial statements for the period ended December 31, 2013.

(2) In connection with his service as a director in 2013 we issued Mr. Rubin options to purchase 6,000 shares of our common stock at an exercise price of $2.875 per share, which were granted on April 4, 2013 and expire on April 4, 2023. All 6,000 shares vest and become exercisable on April 4, 2014. Mr. Rubin passed away in September 2014.

(3) In connection with his service as a director in 2013 we issued Dr. Jones options to purchase 6,000 shares of our common stock at an exercise price of $2.875 per share, which were granted on April 4, 2013 and expire on April 4, 2023. All 6,000 shares vest and become exercisable on April 4, 2014.

(4) In connection with Mr. Gunton s service as a director in 2013, the NJTC Investment Fund, LP was issued options to purchase 6,000 shares of our common stock at an exercise price of $2.875 per share, which were granted on April 4, 2013 and expire on April 4, 2023. All 6,000 shares vest and become exercisable on April 4, 2014.

(5) Pursuant to an agreement and in connection with Mr. Kraus service as a director in 2013 we issued options to purchase 12,000 shares of our common stock at an exercise price of $2.875 per share, which were granted on April 4, 2013 and expire on April 4, 2023. All 12,000 shares vest and become exercisable on April 4, 2014.

(6) Effective July 24, 2008, Dr. Chan was appointed to the Company s Board of Directors and Compensation Committee. Effective January 1, 2009, Dr. Chan entered into an employment agreement becoming interim Chief Executive Officer of the Company. In January 2009, Dr. Chan resigned his position as a member on the

Compensation Committee. Dr. Chan officially became CEO and President in 2010. During 2013, Dr. Chan was an employee Director and was not eligible to receive compensation for Director services.

In 2007, we approved arrangements under which each non-employee director receives a fee of $2,000 for each quarterly Board meeting attended in person and a fee of $1,000 for each quarterly Board meeting participated in by telephone. In 2013, these fees were increased to $2,500 for in person participation and $1,000 for conference call participation in each quarterly meeting. In addition, each non-employee director will be eligible to be issued options to purchase up to 400 shares of our common stock. Such options will be

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exercisable in accordance with the Company s option pricing policy on the date of grant. Our directors are also reimbursed for actual out-of-pocket expenses incurred by them in connection with their attendance at meetings of the Board of Directors.

In connection with his appointment as Chairman of the Board in January 2009, we agreed to compensate Mr. Kraus at the rate of $20,000 per annum, and on January 8, 2009 we issued Mr. Kraus a ten year option to purchase 8,000 shares of our common stock at a price of $2.10 per share. In December 2009, we issued Mr. Kraus an additional option to purchase 4,000 shares of common stock at an exercise price of $4.15 per share. Additionally for services performed as Chief Executive Office of the company through December 31, 2008, the Board approved a 10 year option to purchase 18,000 shares of our common stock at a price of $4.20 per share on January 28, 2009. In January 2011, we renewed the agreement with Al Kraus, as Chairman of the Board of Directors for an additional two year term period. In February 2013, Mr. Kraus entered into another agreement with the Company to remain Chairman of the Board for the fiscal 2013 year, compensated at $25,000 per annum, with the issuance of a ten year option to purchase 12,000 shares of our common stock at a price of $2.875 per share.

Employment Agreements with Named Executive Officers

Phillip Chan

Effective December 31, 2013, we renewed the employment agreement by and between Dr. Phillip Chan and the Company as Chief Executive Officer retroactive to January 1, 2013. Per the terms of the agreement, we agreed to pay Phillip Chan an annual base compensation of $245,386 payable in equal semimonthly installments in accordance with our usual practice. This base compensation shall be subject to review by our Compensation Committee, but his compensation may not be reduced from then current level. He is eligible for employee stock options, which will be adjusted on the same basis as all other stockholders to account for any stock split, stock dividends, combination or recapitalization.

Vincent Capponi

Effective December 31, 2013, we renewed the employment agreement by and between Vincent Capponi and the Company as Chief Operating Officer retroactive to January 1, 2013. Per the terms of the agreement, we agree to pay Vincent Capponi an annual base compensation of $239,445 payable in equal semimonthly installments in accordance with our usual practice. This base compensation shall be subject to review by our Compensation Committee, but his compensation may not be reduced from then current level. He is eligible for employee stock options, which will be adjusted on the same basis as all other stockholders to account for any stock split, stock dividends, combination or recapitalization.

Robert Bartlett

Effective December 31, 2013, we renewed the consulting agreement with Dr. Bartlett. Pursuant to this consulting agreement, in 2013 we agreed to pay Dr. Robert Bartlett consulting fees at an annualized rate of $52,000 payable in equal monthly installments of $4,333.33 per month. In addition, effective December 31, 2013, we entered into a consulting agreement for 2014 in which we agreed to pay Dr. Robert Bartlett consulting fees at an annualized rate of $53,000 payable in equal monthly installments of $4,416.67 per month. He is eligible for stock options, which will be adjusted on the same basis as all other stockholders to account for any stock split, stock dividends, combination or recapitalization.

Kathleen P. Bloch

Effective May 29, 2013, we entered into the employment agreement with Ms. Kathleen P. Bloch. Pursuant to this employment agreement, Ms. Bloch will perform the services and duties that are normally and customarily associated with these positions as well as other associated duties as our Board reasonably determines. The agreement commences on May 29, 2013 and expires on May 31, 2014 and calls for an initial base salary of $200,000 payable in equal semi-monthly installments in accordance with the Company s usual practice. As a signing bonus, Ms. Bloch was also given a ten-year option to purchase 40,000 shares of the Company s common stock. This option vests in equal installments over the next two years: 20,000 options at the 12 month anniversary, and 20,000 options at 24 month anniversary of the signing of this employment agreement, provided that Ms. Bloch remains a full-time employee of the Company.

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CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Director Independence

All members of our Board of Directors, other than Phillip Chan, our President and Chief Executive Officer, are independent under the standards set forth in Nasdaq Marketplace Rule 4200(a)(15).

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SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT PRINCIPAL STOCKHOLDERS

The following table sets forth information known to us with respect to the beneficial ownership of common stock held of record as of December 3, 2014, as adjusted for the reverse split by (1) all persons who are owners of 5% or more of our common stock, (2) each of our named executive officers (see Summary Compensation Table), (3) each director, and (4) all of our executive officers and directors as a group. Each of the stockholders can be reached at our principal executive offices located at 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852.

	SHARES BENEFICIALLY OWNED[1]	
	Number	Percent (%)
Directors and Executive Officers		
Al Kraus[2], *Chairman of the Board of Directors*	398,281	1.5 %
Phillip Chan[3], *President and Chief Executive Officer, Director*	393,798	1.4 %
Vince Capponi[4] *Chief Operating Officer*	360,024	1.3 %
Joseph Rubin[5] *Director*	76,683	*
Robert Bartlett[6] *Chief Medical Officer*	55,600	*
James Gunton[7] *Director*	4,895,779	18.0 %
Edward R. Jones[8] *Director*	27,300	*
Thomas Bocchino**		*
Ronald Berger[9] *Former Interim Chief Financial Officer****	53,420	*
Kathleen Bloch[10] *Chief Financial Officer****	123,000	*
All directors and executive officers as a group (ten persons)	6,383,885	23.5 %
Beneficial Owners of more than 5% of common stock (other than directors and executive officers)		
Robert Shipley[11]	2,973,219	10.9 %
NJTC Venture Fund SBIC, LP[12]	4,895,779	18.0 %

* Less than 1%.

** On February 8, 2013, Mr. Thomas Bocchino, the Company s Chief Financial Officer, gave notice of his resignation, effective immediately, due to personal reasons. Mr. Ronald Berger, a certified public accountant and the Company s controller for the past eight years, was appointed by the Board of Directors as Interim Chief Financial Officer and has assumed Mr. Bocchino s duties as of February 8, 2013. Mr. Bocchino agreed to stay on in a part-time capacity.

*** On May 29, 2013, the Company replaced Mr. Ronald Berger with Kathleen P. Bloch as the Company s new Chief Financial Officer.

(1) Based upon 27,166,024 fully-diluted shares of Common Stock and common stock equivalents as of December 3, 2014. Shares of Common Stock subject to options or warrants currently exercisable or expected to be exercisable with the passage of time, are deemed outstanding for purposes of computing the percentage of the person holding such options or warrants.

(2)

Includes 65,746 shares of common stock and 332,535 shares of common stock issuable upon exercise of stock options.

(3) Includes 71,976 shares of common stock and 321,822 shares of common stock issuable upon exercise of warrants and stock options.

(4) Includes 16,724 shares of common stock and 343,300 shares of common stock issuable upon exercise of stock options.

(5) Includes 32,986 shares of common stock, 40,299 shares of common stock issuable upon exercise of warrants and stock options, and 3,398 shares of common stock beneficially owned by Mr. Rubin s spouse, as to which he disclaims beneficial ownership. Mr. Rubin passed away in September 2014.

(6) These shares are issuable upon exercise of stock options.

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(7) Includes 4,870,219 shares of common stock and 25,560 shares of common stock issuable upon exercise of stock options. These securities are held directly by NJTC Investment Fund SBIC, LP, of which Mr. Gunton is a partner. Mr. Gunton disclaims beneficial ownership.

(8) These shares are issuable upon exercise of stock options.

(9) Includes 13,486 shares of common stock, 39,934 shares of common stock issuable upon exercise of warrants and stock options.

(10) Includes 116,000 shares of common stock issuable upon exercise of stock options, and 7,000 shares of common stock beneficially owned by Ms. Bloch s spouse, as to which she disclaims beneficial ownership.

(11) Includes 2,972,819 shares of common stock, and 400 shares of common stock issuable upon exercise of stock options.

(12) Includes 4,870,219 shares of common stock and 25,560 shares of common stock issuable upon exercise of stock options. These securities are held directly by NJTC Investment Fund SBIC, LP and indirectly through James Gunton, a partner at NJTC.

Auditors; Code of Ethics; Audit Committee

On November 11, 2014, our Board of Directors, upon the recommendation of a majority of the independent directors of the Board of Directors, unanimously appointed Alan D. Sobel to serve as a member of the Board of Directors, effective November 13, 2014. The Board also appointed Mr. Sobel to serve as Chairperson of the newly formed Nominating and Corporate Governance Committee of the Board and to serve as Chairperson of the newly formed Audit Committee of the Board. The Audit Committee of the Board is comprised of three directors, all of which meet independence standards set forth in NASDAQ Marketplace Rule 4200(a)(15). The Board of Directors have determined that Mr. Sobel qualifies as an audit committee financial expert, as such term is defined by Item 4.07(d)(5) of Regulation S-K as promulgated by the Securities and Exchange Commission.

In October, 2013, the Company adopted a Code of Business Conduct and Ethics. All CytoSorbents employees, including our Chief Executive Officer and other senior executives, are required to comply with the Code of Business Conduct and Ethics to help ensure that our business is conducted in accordance with the highest standards of ethical behavior. Our Code of Conduct covers all areas of professional conduct, including customer relationships, conflicts of interest, insider trading, intellectual property and confidential information, as well as requiring strict adherence to all laws and regulations applicable to our business. Employees are required to bring any violations and suspected violations of the Code of Conduct to the attention of the Company, through management, the Board of Directors, or our legal counsel. At the current time, the Code of Business Conduct has been signed by all employees in the United States and is being translated into German. Upon completion of the translation, we will secure the signatures of our Germany-based employees.

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EQUITY COMPENSATION PLAN INFORMATION

The following table summarizes outstanding options as of December 31, 2013, after giving effect to the reverse stocksplit and the merger and subsequent grants.* The Registrant had no options outstanding prior to the 2006 Merger, and all of the options below were issued either in connection with the 2006 Merger to former option holders of CytoSorbents or subsequently as new grants to employees, directors, and consultants.

	Number of securities to be issued upon exercise of outstanding options	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column)
Equity compensation plans approved by stockholders	0	n/a	16,000 (1)
Equity compensation plans not approved by stockholders	1,916.962	$ 5.00	12,156 (2)
Total	1,916,962 (3)	$ 0.20 (3)	12,156

* Effective December 2, 2014, the Company s stockholders, approved the forms, terms and provisions of the CytoSorbents Corporation 2014 Long-Term Incentive Plan, under which 2,400,000 shares of common stock are authorized for issuance.

(1) Represents options that may be issued under our 2003 Stock Option Plan.

(2) Represents the number of options that may be issued under our 2006 Long-Term Incentive Plan, after giving effect to options cancelled. The options available under the pool may be increased to maintain 15% of the fully diluted share count as needed.

(3) Represents options to purchase (i) 76 shares of common stock at a price of $539.25 per share, (ii) 16,995 shares of common stock at a price of $166.00 per share, (iii) 6,800 shares of common stock at a price of $47.50 per share, (iv) 12,240 shares of common stock at a price of $41.25 per share, (v) 16,000 shares of common stock at a price of $31.50 per share, (vi) 6,673 shares of common stock at a price of $31.25 per share, (vii) 120,200 shares of common stock at a price of $6.25 per share, (viii) 5,505 shares of common stock at a price of $5.50, (ix) 94,800 shares of common stock at a price of $4.325 per share, (x) 89,000 shares of common stock at a price of $4.20, (xi) 1,000 shares of common stock at a price of $4.173, (xii) 16,320 shares of common stock at a price of $4.15, (xiii) 16,320 shares of common stock at a price of $4.125, (xiv) 1,000 shares of common stock at a price of $4.095, (xv) 200 shares of common stock at a price of $3.975, (xvi) 1,000 shares of common stock at a price of $3.910, (xvii) 80 shares of common stock at a price of $3.85, (xviii) 2,000 shares of common stock at a price of $3.845, (xix) 20,000 shares of common stock at a price of $3.705, (xx) 1,400 shares of common stock at a price of $3.575, (xxi) 4,000 shares of common stock at a price of $3.50, (xxii) 324,800 shares of common stock at a price of $3.45, (xxiii) 3,600 shares of common stock at a price of $3.40 per share, (xxiv) 12,080 shares of common stock at a price of $3.35 per share, (xxv) 2,000 shares of common stock at a price of $3.323 per share, (xxvi) 21,000 shares of common stock at a price of $3.25 per share, (xxvii) 30,000 shares of common stock at a price of $3.225 per share,

(xxviii) 8,000 shares of common stock at a price of $3.215 per share, (xxix) 3,240 shares of common stock at a price of $3.075 per share, (xxx) 40,000 shares of common stock at a price of $2.90 per share, (xxxi) 412,200 shares of common stock at a price of $2.875 per share, (xxxii) 400 shares of common stock at a price of $2.675 per share, (xxxiii) 31,800 shares of common stoc