CytoSorbents Corporation

NASDAQ: CTSO

Working to Save Lives Through Blood Purification

Investor Presentation
February 2017
Safe Harbor Statement

Statements in this presentation regarding CytoSorbents Corporation and its operating subsidiaries CytoSorbents Medical Inc. and CytoSorbents Europe GmbH that are not historical facts are forward-looking statements and are subject to risks and uncertainties that could cause actual future events or results to differ materially from such statements. Any such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. It is routine for our internal projections and expectations to change. Although these expectations may change, we are under no obligation to inform you if they do. Actual events or results may differ materially from those contained in the projections or forward-looking statements. The following factors, among others, could cause our actual results to differ materially from those described in a forward-looking statement: our history of losses; potential fluctuations in our quarterly and annual results; competition, inability to achieve regulatory approval for our device, technology systems beyond our control and technology-related defects that could affect the companies’ products or reputation; risks related to adverse business conditions; our dependence on key employees; competition for qualified personnel; the possible unavailability of financing as and if needed; and risks related to protecting our intellectual property rights or potential infringement of the intellectual property rights of third parties. This list is intended to identify only certain of the principal factors that could cause actual results to differ from those discussed in the forward-looking statements. Readers are referred to a discussion of important risk factors detailed in the Company’s Form 10-K filed with the Securities and Exchange Commission on March 9, 2016 and other reports and documents filed from time to time by us, which are available online at [www.sec.gov](http://www.sec.gov).
CytoSorbents is a leader in critical care immunotherapy.

Leading the prevention or treatment of life-threatening inflammation in the ICU and cardiac surgery using CytoSorb® blood purification.
CytoSorbents At a Glance

• NASDAQ-traded (CTSO): $5.65 per share

• International footprint across two wholly-owned operating subsidiaries
  • CytoSorbents Medical, Inc - Monmouth Junction, NJ
    • Headquarters, ISO 13485 manufacturing, QA/QC, R&D
  • CytoSorbents Europe GmbH: International sales office - Berlin, Germany
    • CytoSorbents Switzerland GmbH

• Flagship product, CytoSorb®, is E.U. approved, with 20,000+ treatments and distributed in 42 countries

• Strategic Partnerships with Fresenius Medical Care, Biocon, and Terumo

• Strong government support with $18M+ in grants, contracts, other funding

• ~70 employees and consultants worldwide

• Pursuing U.S. approval of CytoSorb® in cardiac surgery via REFRESH I & II

• Doubled 2016 CytoSorb sales to $8.2M vs $4.0M in 2015 with blended gross margins > 65%

• Accelerated growth expected in 2017 with numerous potential catalysts
Leadership Background

Phillip Chan, MD, PhD – Chief Executive Officer and President
Former Partner at the $80M NJTC Venture Fund, leading life science investments for 5 years. Co-founder of Andrew Technologies, commercializing its HydraSolve™ lipoplasty device in the U.S. MD/PhD from Yale School of Medicine, internal medical residency at the Beth Israel Deaconess Medical Center at Harvard.

Vincent Capponi, MS - Chief Operating Officer
30+ years experience in the medical device, pharmaceutical and imaging fields. Led the first regulatory approval for the heparin flush syringe, used worldwide in hospitals, and managed manufacturing of > 1 million units/week

Kathleen Bloch, MBA, CPA – Chief Financial Officer
25+ years as CFO of private and public companies. Former Laureate Biopharma CFO, a contract biopharmaceutical manufacturer, and CFO of Silverline Windows, a $750M revenue window manufacturing company with 9 manufacturing plants nationally

Robert Bartlett, MD - Chief Medical Officer
World-renowned pioneer of extracorporeal membrane oxygenation therapy (ECMO) – used worldwide in ICUs in refractory lung failure. Former Director of the Surgical Intensive Care Unit at University of Michigan, with extensive experience in cardiothoracic surgery and critical care medicine including the treatment of sepsis

Christian Steiner, MD – Vice President of Sales and Marketing
15+ years experience in sales and marketing of extracorporeal therapy and critical care sales at Teraklin for MARS, the first liver failure dialysis technology, and at Pulsion Medical (hemodynamic monitoring)

Christopher Cramer, MS, MBA – Vice President of Business Development
15+ years experience in business development and commercial experience. Former Senior Director of New Venture Development at Johnson & Johnson, and previously at PwC Consulting
Board of Directors

Al Kraus – Chairman (Audit, Governance, Compensation Committees)*
25+ years leadership experience in the dialysis and medical device industries. Former CEO and Board director of CytoSorbents, NOvoVascular, Althin Medical, and former COO and U.S. manager of Gambro, Inc., one of the leading dialysis companies in the world, taking them public through an IPO in the U.S. in the 1980’s and growing sales 4x.

Michael Bator, MBA (Compensation Committees)*
Chief Financial Officer of Trek Therapeutics, a private pharmaceutical company. 15 year Wall Street veteran, most recently as Managing Director - Healthcare Research at Jennison Associates, a US mutual and pension fund management company, with $109 billion in equities and $66 billion in fixed income assets. Formerly a management consultant at several agencies, including the Boston Consulting Group.

Phillip Chan, MD, PhD – Chief Executive Officer and President
Former Partner at the $80M NJTC Venture Fund, leading life science investments for 5 years. Co-founder of Andrew Technologies, commercializing its HydraSolve™ lipoplasty device in the U.S. Internal medicine physician with MD/PhD from Yale School of Medicine, internal medical residency at the Beth Israel Deaconess Medical Center at Harvard.

Edward Jones, MD, MBA (Audit, Governance Committees)*
Clinical Professor of Medicine at Temple University Hospital and attending nephrologist at the Albert Einstein Medical Center and Chestnut Hill Hospital. Past Board member of the National Kidney Foundation of the Delaware Valley, Past President of the Renal Physicians Association, and Chairman of Kidney Care Partners

Alan Sobel, MS, CPA (Audit Committee Chair, Governance Committee)*
Audit Committee Chair. Managing Member of Sobel & Co., LLC, a full-service accounting, audit, tax, and business consulting firm serving individuals, small and mid-sized businesses, and SEC-registered companies. Former Chairman of the Audit Committee of the New Jersey Society of Certified Public Accountants

* Independent directors per SEC definition
Controlling Deadly Systemic Inflammation
Severe Inflammation: Deadly in the ICU

Millions worldwide admitted to the intensive care unit annually with deadly inflammatory conditions

- Severe inflammation is driven by the excessive production of cytokines and other inflammatory mediators that can create a “cytokine storm” that anti-inflammatory drugs cannot control.
- Patients are kept alive with “life support” machines that do not help them get better, but merely keep them alive until hopefully the body starts to heal itself.
- Staggering costs: Lack of “active” therapies leads to patients lingering days to weeks in the ICU at $4,300 per day in the U.S.\(^1\) where 1 in 3 patients will die.
- Hospitals spend 10-15% of their operating budget and the U.S. spends $108B on critical care\(^1\).

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Cardiac Surgery Drives Dangerous Inflammation

- Heart disease is the leading cause of death worldwide driven by smoking, unhealthy lifestyles, and an aging population

- ~1.5M Open Heart Surgeries performed globally
  - Coronary artery bypass graft surgery
  - Valve repair or replacement
  - Heart or lung transplantation
  - Congenital defect repair
  - Aortic reconstruction

- Complex cardiac surgeries require long heart-lung machine pump times, resulting in:
  - Hemolysis and free hemoglobin
  - Inflammatory mediators, cytokines, and complement
  - Levels of nitric oxide, causing decreased blood flow to vital organs

Severe inflammation and reduced blood flow can lead to kidney, lung, and/or heart failure in many patients following surgery
Cytokines Fuel the Fire of Inflammation

- Cytokines are small proteins that normally help stimulate and regulate the immune system and control inflammation.

- Cytokines are a dual edged sword
  - They are required for proper immune system function
  - However, in mild to moderate excess, cytokines can cause or exacerbate disease (e.g. autoimmune diseases).

- But cytokines in vast excess, called “cytokine storm” can lead to a massive uncontrolled systemic inflammatory response syndrome (SIRS).
Massive Inflammation Causes Organ Failure

Organ failure occurs when vital organs stop working, causing nearly half of all deaths in the ICU.

Little can be done to prevent or treat it today.
CytoSorb® Removes the Fuel to the Fire

- CytoSorb® targets the $20+ billion opportunity in critical care and cardiac surgery

- Approved in the European Union as the only specifically approved extracorporeal cytokine filter

- Approved for use in any situation where cytokines are elevated

- Removes cytokines and many other inflammatory mediators such as free hemoglobin, bacterial toxins, myoglobin, and activated complement

- Works with standard dialysis and heart-lung machines

- Safe and well-tolerated: In ~20,000 human treatments, up from 9,000 a year ago

*CytoSorb is not yet approved in the U.S.
Powerful Blood Purification Technology

The underlying blood purification technology is based on biocompatible, highly porous polymer beads that act like tiny sponges to remove harmful substances from blood.

- Protected by 31 issued US patents and multiple applications pending
- Manufactured at our ISO 13485 certified facility in New Jersey
- One of the highest grade medical sorbents on medical market today
CytoSorb® Active in Cytokine Sweet Spot

Hemodialysis

CytoSorb

0 10 20 30 40 50 60 70 kDa

IL-1a, TNF-α monomer, IFN-γ monomer, IL-1Ra, Myoglobin, Procalcitonin, MCP-1, IL-13, Complement C5a, Complement C3a, IL-8, MIP-1α, Aflatoxin, T2 mycotoxin, Bilirubin, Pancreatic Trypsin, Toxic Shock Syndrome Toxin, IL-18, Pancreatic Chymotrypsin, HMGB1, TGF-β, IL-6, sFas ligand, SPE B toxin, sTNFR, MCP-1 glycosylated, Alpha-hemolysin, IFN-γ dimer, Pneumolysin toxin, Pancreatic Lipase, Amylase, Free Hemoglobin, Albumin

CytoSorbents

Working to Save Lives Through Blood Purification
CytoSorb® Broadly Reduces Cytokines

Cytokine reduction over time during in vitro perfusion with serum (or buffer)

The two lines on each graph represent CytoSorb cytokine removal from serum (triangle) or buffer (square)

Valenti, I “Characterization of a Novel Sorbent Polymer for the Treatment of Sepsis” 2008
CytoSorb® is Plug-and-Play with Existing Machines

**Easy to Use, No Special Equipment or Training Required**

- Place a temporary dialysis catheter in a major vein
- Connect the device to a standard dialysis machines found in hospitals worldwide
- Pump blood out of the body and through the cartridge
- The polymer beads directly contact blood and remove unwanted or toxic substances
- “Purified” blood is pumped back into the patient
- Can treat 70+ total blood volumes per 24 hr treatment
- Each treatment uses a new cartridge
Goal: To Prevent or Treat Organ Failure

- Improve Patient Outcome and Survival
- Decrease Costs of ICU and Patient Care

The Potential to Revolutionize Critical Care Medicine

- Sepsis
- ARDS
- Burn Injury
- Trauma
- Pancreatitis
- Influenza
- Surgical
CytoSorb is a new immunomodulation strategy to control severe inflammation in the ICU.

- **Anti-Inflammatory (too weak)**
  - NSAIDS
  - Aspirin
  - Anti-cytokine antibodies
  - Anti-integrin antibodies
  - Anti-oxidants

- **Immunosuppressive (too strong)**
  - Corticosteroids
  - Chemotherapy
  - Organ transplant
  - Anti-rejection drugs
  - Radiation
  - Immune system ablation
  - Anti-leukocyte antibodies

- **Immunomodulatory (“balanced”)**

CytoSorbents | Working to Save Lives Through Blood Purification
Blood Purification Competition

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<thead>
<tr>
<th>Sorbents</th>
<th>HMCO Filters</th>
<th>Coupled Plasma Filtration Adsorption</th>
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<tbody>
<tr>
<td>CytoSorb - CytoSorbents</td>
<td>EMiC2 - Fresenius</td>
<td>CPFA - Bellco I.M.P.A.C.T - Hemolife</td>
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<td>SepteX - Gambro</td>
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CytoSorb is the leader in cytokine and mid-molecular weight toxin removal. It has significant advantages of hemocompatibility, high blood flow/low resistance, massive surface area, ease of use, and compatibility with most extracorporeal blood pumps (e.g. dialysis, CRRT, and heart-lung machines).
$18+ Million in U.S. Government Support

- DARPA awarded $3.8M five year (2012-present) contract as part of “Dialysis-Like Therapeutics” program to treat sepsis by removing cytokines and pathogen-derived toxins
- U.S. Army awarded ~$1.7M SBIR contracts for trauma and burn injury research and hyperkalemia (2011-present)
- JPEO-CBD awarded $150K Phase I SBIR contract for fungal mycotoxin removal (2016-present)
- U.S. Dept of Health and Human Services awarded $0.5M grant (2010) for therapies that can save lives and reduce costs under the QTDP Program
- NIH grant awarded $7M five year (2006-2010) to University of Pittsburgh and Dr. John Kellum to research CytoSorb beads for treatment of sepsis
- NIH/NHLBI and SOCOM awarded $1.7M Phase I & II SBIR contracts for HemoDefend blood purification technology to improve the quality/safety of blood transfusions (2013- present)
- Defense Health Agency awarded a $150K Phase I SBIR contract to treat hyperkalemia
- More than $2M in New Jersey funding for research-related net operating losses
The World Needs CytoSorb®
Key Catalyst #1: Drive CytoSorb Growth and Profitability
CytoSorb® Is a High Margin Razorblade

- CytoSorb is a high margin “razorblade” disposable that is fully compatible with the existing installed base of dialysis and ECMO “razor” machines in the ICU, and heart-lung machines in the operating room.

- Average Selling Price is approximately $1,000 per cartridge.

- Approximately 1 - 10 cartridges are typically used per patient. Open heart surgery uses 1-2 cartridges, treatment of sepsis uses 3-5 cartridges. An entire course of treatment for sepsis is roughly the cost of 1 day in the ICU.

- Blended gross margins are >65%, but with economies of scale and manufacturing efficiencies, this is expected to be closer to 80%.

- In Germany, 400 hospitals have >400 beds. Each of these hospitals will see 300-600 sepsis patients per year. At 3-5 cartridges per patient, each hospital has a total potential CytoSorb revenue of $1-3M for sepsis alone.
CytoSorbents’ direct sales force focused on most major university and public hospitals in Germany, Austria, Switzerland, Belgium and Luxembourg. German market alone is $1.0-1.5 billion.
Dedicated Reimbursement In Germany

- There are various mechanisms by which CytoSorb is being paid for or reimbursed in other countries (e.g. DRG reimbursement, tender orders, etc).

- CytoSorb has recently achieved a permanent, dedicated reimbursement code in Germany – our most important market and the largest medical device market in the European Union.

- Validates the importance of our therapy to physicians in the country.

- Was achieved very rapidly by the initiative and strong support of several major medical societies across different medical specialties.

- Effective January 1, 2017, the new code is expected to result in much higher reimbursement compared to the more generic code we have used, which in many cases led to inadequate reimbursement, impeding usage and sales.

- Expected to catalyze major increases in usage and CytoSorb sales in Germany, and positively impact reimbursement in other countries.
CytoSorb® Distributed in 42 Countries
Geographic Expansion – A Growth Engine

We continue to add new and existing distributors into the “contributing to revenue” category and many other countries.

### January 2016

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<tr>
<th>Contributing to Revenue</th>
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**Total:** 1,621

### January 2017

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<td>Luxembourg</td>
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**Total:** 2,098

**Total:** 1,693
### Quarterly Product Sales

Seventh consecutive quarter of product sales growth
Sixth consecutive quarter of record sales

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<th>Quarter</th>
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<td>Q1 2015</td>
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<td>Q2 2015</td>
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<td>Q3 2015</td>
<td>$2,143,116</td>
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<tr>
<td>Q4 2015</td>
<td>$2,600,000</td>
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*Range: $2.5-2.7M*
Annual Product Sales

Range: $8.1-8.3M
Growth Driven by Direct, Distributor, Partner Sales

*This graph is provided only to demonstrate the concept of revenue layering. It does NOT represent revenue forecasts or guidance.
Operating Profitability Expected in 2 Years

Operating profitability is expected within 2 years at ~$20M in sales, at which point an estimated 40-50 cents on every dollar drops to the bottom line.

Product sales continue to grow rapidly while increases in fixed non-clinical, non-cash expenses taper off.
Key Catalyst #2:

Drive Clinical Data to Support CytoSorb As Standard of Care
Robust Clinical Program and Team

Chief Medical Officer

U.S.
- Director of Clinical Operations
- Statistician

Rest of World
- Medical Director
- Sr.Manager Clinical Affairs
- Director Scientific Affairs

Sepsis Advisory Board
- Cardiac Surgery Advisory Board
- Trauma Advisory Board

REFRESH: Cardiac Surgery
Sepsis

International CytoSorb Registry

58 Investigator Initiated Studies

Publications

Germany Dosing Study
Additional Sepsis Trials

CytoSorbents
Working to Save Lives Through Blood Purification
3rd International CytoSorb Users Meeting

For more information, visit: https://www.b2match.eu/cytosorbusersmeeting2016
Leading US Advisors in Cardiac Surgery

Dr. Joe Zwischenberger, M.D.
- SAB Chair
University of Kentucky

Dr. Robert Bartlett, M.D.
University of Michigan

Dr. Paul Checchia, M.D.
Texas Children’s Hospital in Houston

Dr. Nicholas Smedira, M.D.
Cleveland Clinic Foundation

Dr. Jonathan William Haft, M.D.
University of Michigan

Dr. Craig Smith, M.D.
Columbia University

Dr. Peter Wearden, M.D., Ph.D.
U. of Pittsburgh Medical Center
U.S. REFRESH I Trial – Safety Confirmed
REduction in FREe Hemoglobin

- 40-patient, eight-center study evaluating the safety and efficacy of intra-operative use of CytoSorb® in a heart-lung machine during complex cardiac surgery in elective, non-emergent cardiac surgery > 3 hours
  - Aortic reconstruction, CABG redos, multiple valve replacements, etc

- Working with major cardiac surgery centers
  - Baylor College of Medicine and Texas Heart Institute
  - Baystate Medical Center
  - Columbia University
  - Cooper University Hospital
  - University of Kentucky
  - University of Maryland
  - University of Pennsylvania
  - University of Pittsburgh Medical Center

- Primary endpoints were safety and reduction in free hemoglobin
REFRESH I Trial – Safety
REduction in FREE Hemoglobin Trial

- A total of 46 patients were enrolled with ~40 patients with evaluable biomarker data

- The Data Safety Monitoring Board (DSMB) evaluated all reported adverse and serious adverse events in the control and treatment arms, and concluded there was no safety issue with CytoSorb therapy, achieving the primary safety endpoint of trial.

- First RCT using CytoSorb in high risk cardiac surgery, demonstrating safety

- We plan to present safety, free hemoglobin, and other clinical data at the AATS cardiac surgery conference in April

- Following a meeting with the FDA to discuss the data and clinical path, the company expects to begin the REFRESH 2 trial in the first half of 2017 with approval possible in 2018-19 depending on the clinical path (de novo 510(k) vs PMA)
Recent Clinical Data in Cardiac Surgery

• Interim analysis of 165 patients enrolled into a 3-arm randomized controlled study at University of Cologne, Germany evaluating the intra-operative use of CytoSorb during open heart surgery, reported a statistically significant reduction in sternal wound infections, a major and expensive complication following cardiac surgery

• A 10 patient cardiac surgery evaluation study led by Prof. Christophe Baufreton, MD, PhD, cardiothoracic surgeon and Vice Dean of Research from C.H.U - Angers, France, in a complex cardiac surgery patient population similar to those in the REFRESH I study
  • Improved hemodynamic stability especially with 2 patients undergoing valve surgery due to endocarditis
  • Reduction in the need for vasopressors and expensive extracorporeal life support

• Medical University of Vienna recently published data from a 37-patient randomized controlled study using CytoSorb intra-operatively during low-to-medium risk cardiac surgery and demonstrated safety and technical feasibility. Inflammation in general was not a problem for any of these low-to-medium risk patients
Post-op SIRS (Cardiac Surgery) Case Series

A retrospective case series was recently published on 16 consecutive cardiac surgery patients who developed post-operative SIRS following prolonged cardiopulmonary bypass, with shock requiring vasopressors and acute kidney injury requiring hemofiltration.

Key Findings:
- Therapy was well-tolerated and safe
- Marked decrease in IL-6 and IL-8 during the course of CytoSorb treatment
- Hemodynamic stabilization and reduction in vasopressors and lactate

Advisory Board in Critical Care

John Kellum, MD (Chair)
University of Pittsburgh

Mitchell Cohen, MD
University of San Francisco

Raul Coimbra, MD, PhD
University of San Diego

Ronald Maier, MD
University of Washington, Seattle

Ernest Moore, MD
University of Colorado

Emil Paganini, MD
Cleveland Clinic Foundation

Joseph Parrillo, MD
Hackensack Heart and Vascular Hospital

Claudio Ronco, MD
St. Bartolo Hospital, Vicenza, Italy
New Trials for Severe Sepsis & Septic Shock

- Sepsis, the overzealous immune response to a serious infection, is a Top Ten cause of death by causing organ injury, organ failure, and death

- Largest, most complex, critical care market; ~30 million people afflicted worldwide each year, estimated 10 million deaths

- Currently no approved products to treat sepsis

- U.S. and European clinical trials being planned to advance CytoSorb as standard of care for sepsis
CytoSorb Attacks Sepsis Broadly

- Inflammatory cytokines (organ failure) & other factors
- Immunosuppressive cytokines & re-establish immune responsiveness
- Many bacterial toxins (organ failure)
- Re-establish proper leukocyte trafficking to prevent cell-mediated organ injury
- Improvement in hemodynamics
- Reduction in capillary leak

No other single therapy has demonstrated this broad range of activity
Refractory Septic Shock

At the 26th Symposium for Intensive Medicine + Critical Care in Bremen, Germany, Dr. Sigrun Friesecke, Senior Intensivist in the Greifswald University Hospital MICU reported on a prospective, single arm study in 22 patients with refractory late-stage septic shock.

- Patients had refractory shock despite high doses of vasopressors, respiratory failure requiring mechanical ventilation or ECMO, anuric kidney failure requiring dialysis, and lactate > 8 mmol/L.

- A similar population (n=16) receiving standard of care, where shock could not be reversed, also on mechanical ventilation with an initial lactate level of 6.1 ± 4 mmol/L, and 75% requiring renal replacement therapy had a mortality of 100% at 28 days.*

- Results from the CytoSorb Greifswald Study
  - 28-day survival was 41%, a 30-40% absolute improvement over expected (0-10%)
  - Resolution of shock in 68% of patients treated with CytoSorb
  - Reduction of IL-6 from an initial average of 87,000 pg/mL to below 10,000 pg/mL after 24 hours of treatment

Septic Shock Series

- 8 patient case series: 2 severe sepsis, 6 septic shock
- CytoSorb® used with continuous renal replacement therapy (CRRT) for 24 hours at a time, with a median treatment time of 2 days
- Those that benefited showed an improvement in hemodynamics, with a rapid reduction of vasopressors, a reduction in procalcitonin (a sepsis biomarker) and an improvement in renal function
- Mortality was 25%. The two patients that died showed no positive response to the therapy
- Authors suggest a “timely use” of CytoSorb and additional studies to confirm their findings
Septic Shock and SIRS Case Series

- 14 patient case series: Abdominal sepsis (29%), pneumonia (50%), pancreatitis (14%), other (7%)
- Patients were critically ill, with a mean APACHE II score of 37, predicting a mortality of > 85% in sepsis
- Observed a pronounced 10-fold decrease in vasopressor requirement and a reduction in blood lactate levels by 50%
- Overall survival was 36%, but when therapy was started within 24 hours of, survival was 67%
- The investigators recommend early usage (<24 hours after admission), similar to how CytoSorb is being used today
Removal of Bilirubin

- The liver is a major detoxification organ
- Patients with either chronic liver failure due to alcoholic cirrhosis, NASH, or viral hepatitis, as well as acute liver failure, due to infection, liver cancer, alcohol, poisoning, shock, and other causes will have high levels of unconjugated bilirubin which can be neurotoxic
- This manifests clinically as jaundice
- CytoSorb is very effective in reducing bilirubin, cytokines, and other potential toxins that a compromised liver cannot, and is being considered as an adjunct therapy or standalone therapy in liver failure
- Liver failure is estimated to be the 12th leading cause of death in the U.S., and the 4th leading cause of death in China
More Studies Underway

- Broad clinical program in Europe with 58 investigator-initiated studies in various stages, including several that have completed and nearly half have started and/or are enrolling

- These studies run the gamut from sepsis, cardiac surgery, post-operative inflammation, liver failure, trauma, and many other applications

- In addition, we have a number of company sponsored trials in cardiac surgery and sepsis that are expected to start this year, in both Europe and the U.S.

- There are more than two dozen publications ranging from case reports, case series, and small randomized controlled studies that have been submitted or are being prepared for submission, including:
  - The University of Greifswald refractory shock trial
  - A second analysis of the International CytoSorb Registry by the University of Jena
  - The first known successfully treated case of malaria using CytoSorb

- These data will be extremely helpful in driving continued usage and adoption, as well as reimbursement of CytoSorb in many different markets
Many Published Peer-Reviewed Articles

Case Series and Case Reports

CytoSorb®

Proceedings
2nd International Users’ Meeting, Berlin, Germany
October 2nd, 2010

CytoSorb®

Proceedings
3rd International CytoSorb Users’ Meeting
Brussels, Belgium, March 14th, 2016

CytoSorb®

CytoSorb® Therapy
Indications and Set-up
CytoSorb Website – A Wealth of Info

Visit us at www.cytosorb.com
The International CytoSorb® Registry
Visit CytoSorb.com for Case of the Week

Case of the week 17/2016

CytoSorb in pneumogenic septic shock after ethytoxic bone marrow depression and increased comorbidity (alcohol abuse, 3-fold ACVB)

Dr. Matthias Lutze, Head of Department for Anaesthesiology and Intensive Care Medicine, Hospital Teterow, Germany

This case study reports on a 53-year-old male patient (medical history of 3-fold ACVB and pacemaker implantation) who presented at the hospital with ethytoxic pancytopenia, acute alcohol withdrawal delirium and hypostatic bilateral pneumonia.

Case presentation

- Immediate transfer to intensive care unit – at this point of time the patient was awake, responsive, tachycardic and hallucinating
- Instant initiation of anti-delirious therapy (gamma hydroxybutyrate, Haloperidol) as well as administration of ampicillin/sulbactam

We have had excellent feedback from both physicians and investors on the many exciting case reports presented in the CytoSorb “Case of the Week” on the www.cytosorb.com website.

These cases highlight the ongoing successes that clinicians continue to have as they treat earlier or more aggressively.

Our goal, using these reports, our Proceedings of the International CytoSorb Users meeting publication, and our Case Study Summary booklet is to broadly teach our users how and when the therapy is being used most effectively.
Key Catalyst #3: Leverage Pipeline to Establish Strategic Partnerships
Beads Enable a Broad and Valuable Pipeline

- **HemoDefend**: Blood Collection & Transfusion
- **CytoSorb-XL**: Sepsis, Critical Care, High Risk Surgery
- **Potassium Sorbent**: Severe Hyperkalemia
- **ContrastSorb**: CT Imaging, Interventional Radiology
- **DrugSorb**: Drug Overdose, Chemo Removal
- **BetaSorb**: Improving Dialysis

**BioBeads Enable a Broad and Valuable Pipeline**

- CE Mark Approved
- Under Development

- Critical Care, High Risk Surgery
- CT Imaging, Interventional Radiology
- Sepsis, Critical Care, High Risk Surgery
- Severe Hyperkalemia
- Drug Overdose, Chemo Removal
- Improving Dialysis
Three Major Partnerships, Potential for More

*Companies listed here are used simply as examples of companies in these respective verticals. We make no other representations to our relationship with any of these companies.*
Expanded Fresenius Partnership

• CytoSorbents entered into a strategic partnership with Fresenius Medical Care (FMC) – the world's largest provider of products and services for individuals with renal diseases – at the end of 2014

• As part of it’s growth strategy in acute care, FMC launched CytoSorb sales and marketing for critical care applications in May 2016 in ICUs across France, Poland, Denmark, Norway, Sweden and Finland

• Yesterday, FMC and CytoSorbents announced an expansion of the original partnership and a new co-marketing agreement for worldwide CytoSorb markets

• Agreement brings increased commitment with 3-year renewal, guaranteed minimum orders of CytoSorb, and establishes joint CytoSorb marketing collateral and efforts in active sales territories
• Entered into a multi-year partnership with Terumo Cardiovascular Group, a global leader in medical devices for cardiac and vascular surgery

• Initial exclusive distribution of CytoSorb® in France, Denmark, Norway, Sweden, Finland, and Iceland

• Launched December 2016

• Strong validation of our technology and opens door to potential expansion to other countries, such as Japan – the second largest medical device market in the world
Biocon has renewed focus on CytoSorb.

- Biocon is the largest biopharmaceutical company in India.
- Significant growth in India with expansion into Sri Lanka.
- They have renewed their commitment to CytoSorb with its own division, sales force, and funding for small clinical studies.
Strong Technology Validation of CytoSorb

$18M in Grant and Contract Funding

20,000 Human Treatments and Growing

CytoSorbents
Working to Save Lives Through Blood Purification
Launch of **VetResQ** for Animal Health

- VetResQ is now commercially available in the U.S. for the specialty veterinary and animal health markets

- Designed to treat deadly inflammation, toxic injury, and drug intoxication in a broad range of animals, including cats, dogs, and horses. These include common animal ailments of sepsis, acute pancreatitis, and accidental drug ingestion

- Works in standard hemodialysis machines

- Uses similar underlying blood purification technology that is used in CytoSorb

- Is manufactured in 3 sizes: 30, 100, and 300 mL cartridges
Advanced Development of CytoSorb-XL

- CytoSorb-XL is a next generation porous polymer bead technology combining lipopolysaccharide (LPS) endotoxin removal with the robust cytokine, toxin, and inflammatory mediator reduction achieved by CytoSorb®

- Endotoxin is a very potent stimulator of cytokine storm, often resulting in septic shock in serious Gram negative bacterial infections related to abdominal or urinary tract infections, pneumonia, and hospital acquired infections

- In a head-to-head comparison, CytoSorb-XL matched the level of endotoxin reduction of the leading endotoxin adsorber, Toraymyxin™ (Toray, Japan) in an in vitro plasma recirculation system

- CytoSorb-XL is expected to eliminate the need for stand-alone endotoxin specific filters by offering superior performance and removal of endotoxin and a broad range of inflammatory mediators that drive uncontrolled deadly inflammation

- CytoSorb-XL and its novel endotoxin binding chemistry are the subject of a broad composition of matter patent application, intended to protect the technology worldwide for the next two decades. CytoSorb-XL is intended to succeed CytoSorb®
Key Catalyst #4: Increase Investor Awareness
NASDAQ Capital Market Listed

- Clean capital structure with average daily trading value of ~$425,000
CytoSorbents Corporation Set to Join Russell Microcap Index

6/19/15

CytoSorbents Corporation (NASDAQ: CTST), a critical care immunotherapy leader commercializing its CytoSorb® blood purification technology to reduce deadly uncontrolled inflammation in hospitalized patients around the world, is set to join the Russell Microcap® Index at the conclusion of the Russell indexes annual reconstitution on June 26, 2015, according to a preliminary list of additions posted on June 12, 2015.

Membership in the Russell Microcap Index, which remains in place for one year, means automatic inclusion in the appropriate growth and value style indexes. FTSE Russell determines membership for its Russell indexes primarily by objective, market-capitalization rankings and style attributes.

Dr. Phillip Chan, Chief Executive Officer of CytoSorbents stated, "We are pleased to be included in the Russell Microcap Index, a significant corporate achievement that is expected to increase visibility and exposure of our company and life-saving technology to the broader investment community. This complements our continued institutional investor outreach, where the response has been extremely positive to date."

Russell indexes are widely used by investment managers and institutional investors for index funds and as benchmarks for active investment strategies. Approximately $5.7 trillion in assets are benchmarked to the Russell's U.S. indexes. Russell Indexes are part of FTSE Russell, a leading global index provider.

For more information on the Russell 1000 and the Russell indexes reconstitution, go to "Recon Central" through the FTSE Russell website.
Increasing Media Coverage

Forbes
Jennifer Weiss Contributor

This Blood Filtering System Could Help Lower The Risk of Death From Inflammatory Infections

TheStreet
Phil Chan
CEO, CytoSorbents

Exclusive: CytoSorbents CEO On How Its Blood Purification Technology Can Change Healthcare

Benzinga

Trauma to the body comes in many forms – severe burns, gun shot wounds, liver failure, drug overdose, sepsis – which can be deadly. Treating these types of trauma to the body means people end up in the intensive care unit (ICU).

GEN

CytoSorbents Expanding Marketing Reach Of CytoSorb Blood Purifier

Medtech Insight
Pharma intelligence

Executive Summary
CytoSorbents is sponsoring the REFRESH trial of its CytoSorb extracorporeal cytokine adsorber in the US, which the company hopes will support approval of a pivotal trial of the device for reducing red plate free hemoglobin and cytokines in patients undergoing complex cardiac surgery.
Increasing Analyst Coverage

CytoSorbents Corporation (CTSO) Rating: Buy
Initiating With A Buy and $52 Price Target

CytoSorbents Corporation (CTSO)
Healthcare Medical Technology
Buy, $11.25 PT
Friday, 02/05/2021

CytoSorbents Corp (CTSO)
Rating: Buy

H.C. Wainwright & Co.

CytoSorbents Corporation (NasdaqCM: CTSO)
Initiating Coverage with a Speculative Buy Rating and One-Year Price Target of $13.00

WBB Securities, LLC

Zacks Small-Cap Research

CytoSorbents Corporation (CTSO-NASDAQ)

Earnings Update
Medical Device
May 10, 2016

Company reported revenues of $0.3M, higher than the estimate of $0.1M.

WBB Securities, LLC

CytoSorbents Corporation (NasdaqCM: CTSO)
Initiating Coverage with a Speculative Buy Rating and One-Year Price Target of $13.00

Cytosorbents has developed a proprietary technology to extract inflammatory mediators such as cytokines and tumor necrosis factors from blood in critical care patients as well as other underlying cardiac patients. The company's lead product is called CytoSorb.

CytoSorbents Corporation

A New Paradigm in Septic and More: Initiating Coverage with a Buy Rating and a $8.00 Price Target

EQUITY RESEARCH
INITIATION

CytoSorbents Corporation

Current Price: (06/16/16)
Valuation
$4.25
$12.80

Outlook

Current Price:
$4.25
$12.80

CytoSorbents Corporation

Working to Save Lives Through Blood Purification

CytoSorbents Corporation (CTSO)
Biotechnology
Initiating Coverage

CytoSorbents Corporation

CytoSorbents Corporation

Maxim Group

Equity Research
Initiation
Newly Launched Corporate Website

Please visit us at [www.cytosorbents.com](http://www.cytosorbents.com)
CytoSorbents Has Tremendous Potential

CytoSorbents is a hybrid: Combines the greater visibility and lower risk of a medical device company with product sales with the upside potential of biotech

CytoSorbents plans to achieve key investor milestones within the next 2 years

- We expect to exceed $10 million in sales this year, a key revenue threshold for many fundamental institutional investors

- We expect to achieve operating profitability, with expanding sales and gross margins, within the next 1-2 years, completely changing our investment profile

- Following discussions with the FDA, we plan to initiate a pivotal, registration trial for CytoSorb in the U.S., putting a time-line, for the first time, on a potential U.S. approval

CytoSorb is helping to save lives throughout the world
Providing Hope
in a helpless situation

HELPING PATIENTS SURVIVE CRITICAL ILLNESSES WORLDWIDE

CytoSorbents
Working to Save Lives Through Blood Purification

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Dr. Phillip Chan, MD, PhD – CEO
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