HELPING PATIENTS SURVIVE THE RAVAGES OF DEADLY INFLAMMATION WORLDWIDE

CytoSorbents™

Working to Save Lives Through Blood Purification

NASDAQ: CTSO

Cowen Healthcare Conference
March 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 3, 2017 and other reports and documents filed from time to time by us, which are available online at 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): $5.50 per share
- ~70 employees worldwide with 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
- Flagship product, CytoSorb®, is E.U. approved, with 20,000+ treatments and distributed in 42 countries
- Strategic Partnerships with Fresenius Medical Care, Terumo, and Biocon
- Strong government support with $18M+ in grants, contracts, other funding
- Pursuing U.S. approval of CytoSorb® in cardiac surgery
- Doubled 2016 CytoSorb sales to $8.2M vs $4.0M in 2015 with blended gross margins of 67%
- 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
Millions Die Of Uncontrolled Deadly Inflammation Each Year

- Sepsis
- Trauma
- Influenza
- Burn Injury
- Lung Injury
- Pancreatitis
- Surgical Complications
- Liver Failure
- Cytokine Release Syndrome
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
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
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

The World Needs CytoSorb®
$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
Product Pipeline

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

- **CE Mark Approved**
- **Potassium Sorbent**
- **U.S. Animal Health Market**
- **Under Development**
We Expect to Achieve Operating Profitability Within 2 Years
CytoSorb® Is a High Margin Razorblade

- CytoSorbents is a pure play high margin disposables business where CytoSorb is the “razorblade” that is fully compatible with the existing installed base of “Razor” ICU dialysis and ECMO machines, and heart-lung machines in the OR.

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

- 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.

- 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:
  - Revenue per patient = ~$3,000-5,000
  - Potential revenue per hospital = $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.
CytoSorb® Distributed in 42 Countries
Quarterly Product Sales

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

CytoSorb® Product Sales

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Seventh consecutive quarter of product sales growth
Sixth consecutive quarter of record sales
Annual Product Sales

- 2013: $821,787
- 2014: $3,135,387
- 2015: $4,043,819
- 2016: $8,206,036

Trend Line
Over the past three years, the compound growth rate of return ("CAGR") on product sales in Germany, the market we have been in the longest was 128%.
Worldwide Product Sales

Sales outside Germany are growing as new countries are added and CytoSorb is adopted and used more frequently in existing countries.
Dedicated Reimbursement In Germany

- CytoSorb has 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
Expanded Fresenius Partnership

CytoSorbents renewed its partnership with Fresenius Medical Care in January 2017

1) 3 year extension on exclusive distribution of CytoSorb for ICU applications in France, Poland, Denmark, Norway, Sweden, and Finland

2) Increased commitment with guaranteed quarterly orders of CytoSorb evaluable every 1.5 years

3) Co-marketing agreement across all of the countries where CytoSorb is sold, where possible
   • Increases the “effective” sales force by 2-3x in each country
   • Fresenius to provide written endorsement of CytoSorb for the multiFiltrate platform including the inclusion of CytoSorb as a programmed option on the multiFiltrate PRO
   • Jointly developed marketing materials
Launched in December

- 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.

Treat Primary Infection with Antibiotics

Treat Massive Inflammatory Response with CytoSorb
Driving Toward Operating Profitability

Product sales continue to grow rapidly while increases in fixed non-clinical, non-cash expenses taper off.
We expect to begin the path to U.S. approval later this year with initiation of a U.S. cardiac surgery REFRESH II Trial
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
In this first RCT using CytoSorb in high risk cardiac surgery, we have:

- Demonstrated safety of the therapy
- Identified surgical procedures where patients have the highest levels of plasma free hemoglobin and can be used to enrich future studies for those at greatest risk of organ injury
- Demonstrated that CytoSorb reduces key inflammatory mediators during the treatment period

An abstract of the REFRESH I Trial has been submitted for the AATS conference.

Meanwhile we plan to confirm the clinical trial strategy with the FDA and expect to begin a registration trial later this year, designed to seek approval of CytoSorb in the U.S. for the application of cardiac surgery.

Depending on the clinical path, approval could occur in the 2018-20 timeframe.

Further detail will be forthcoming soon.
CytoSorbents: A Unique Company
CytoSorbents is a unique “De-risked” Hybrid

Combines greater visibility and lower risk of a medtech company with a “razorblade”, high margin business model and strong technology validation

- $8.2M in 2016 sales
- 70+% Direct Margins
- 20,000 human treatments and growing

$18M in Grant and Contract Funding

And the upside profile of a biotechnology company with a $20B worldwide market opportunity in critical care and cardiac surgery
Providing Hope
in a helpless situation

HELPING PATIENTS SURVIVE CRITICAL ILLNESSES WORLDWIDE

CytoSorbents
Working to Save Lives Through Blood Purification

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