



CytoSorbTM

HELPING REDUCE DEADLY UNCONTROLLED INFLAMMATION IN HOSPITALIZED PATIENTS WORLDWIDE

B. Riley & Co. Conference Presentation

May 24, 2017

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This presentation contains “forward-looking statements” pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, without limitation, any statement that may predict, forecast, indicate, or imply future results, performance or achievements, and may contain the words "estimate," "intend," "target," "will," "is likely," "would," "may," or, in each case, their negative, or words or expressions of similar meaning. These forward-looking statements are found at various places throughout this presentation and include information concerning possible or assumed future results of our operations; business strategies; future cash flows; financing plans; plans and objectives of management; any other statements regarding future operations, future cash needs, business plans and future financial results, and any other statements that are not historical facts. Unless otherwise indicated, the terms “CytoSorbents,” “Company,” “we,” “us” and “our” refer to CytoSorbents Corporation. Any or all of the forward-looking statements included in this presentation are not guarantees of future performance and may turn out to be inaccurate. These forward-looking statements represent our intentions, plans, expectations, assumptions and beliefs about future events and are subject to risks, uncertainties and other factors. Many of those factors are outside of our control and could cause actual results to differ materially from the results expressed or implied by those forward-looking statements. 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 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. In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements might not occur or might occur to a different extent or at a different time than we have described. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of the applicable presentation. You 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.

Investment Highlights

CytoSorb blood purification technology targets the reduction of deadly uncontrolled inflammation in hospitalized patients around the world

- Approved in the E.U. – Distributed in 43 countries worldwide (5 countries direct)
- 23,000+ human treatments, double a year ago
- \$9.2M in CytoSorb sales in trailing 12 month sales, blended gross margins of 68%
- Four major strategic partners: Fresenius Medical Care, Terumo Cardiovascular, Biocon, Ltd, and Dr. Reddy's Laboratories
- \$18M in grants and contracts from the U.S. government for the technology
- High margin pure play disposables medtech with potential upside of a biotech

In 2017-2018, we are targeting multiple value creating milestones:

- Expecting continued growth after exceeding a \$10M annual sales run-rate in Q4 2016, a key revenue threshold
- Following anticipated discussions with the FDA in the near future, we plan to initiate a pivotal, registration trial for CytoSorb in the U.S., setting path to FDA approval

Experienced Leadership Team

Key Management & Previous Experience

	Years of Experience Industry / CytoSorbents	
<p>Phillip Chan, MD, PhD Chief Executive Officer</p>	>10 / 9	 
<p>Kathleen Bloch, MBA, CPA Chief Financial Officer</p>	>20 / 3	 
<p>Vincent Capponi, MS Chief Operating Officer</p>	>20 / 15	  

Independent Board of Directors

Al Kraus	Michael Bator	Edward Jones	Alan Sobel
Former CEO, CytoSorbents, NOvoVascular and Althin Medical; Former US Manager, Gambro	Former Managing Director of Healthcare Research, Jennison Associates	Clinical Professor of Medicine, Temple University Hospital	Managing Member, Sobel & Co.

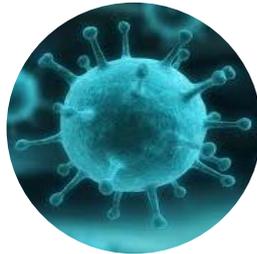
Sepsis



Trauma



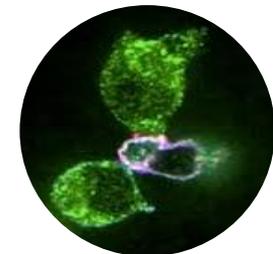
Influenza



Burn Injury



**Millions Die
Of Uncontrolled
Deadly
Inflammation
Each Year**



**Cytokine Release
Syndrome**



Lung Injury



Pancreatitis



Surgical Complications



Liver Failure

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 organ failure today

No Ideal Options to Treat Severe Inflammation

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 Abs

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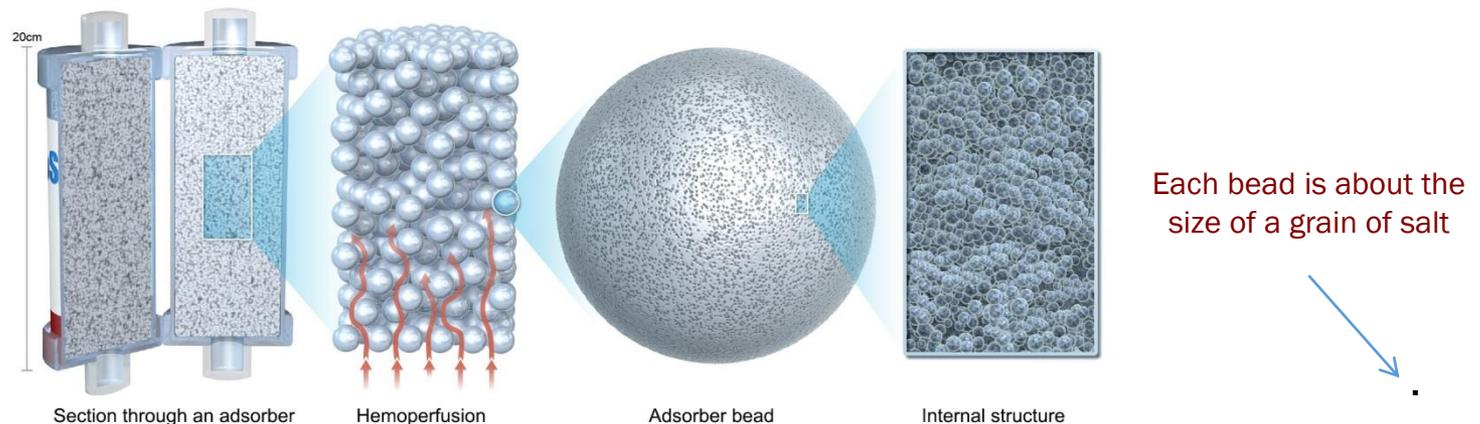
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Patented Blood Purification Technology

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

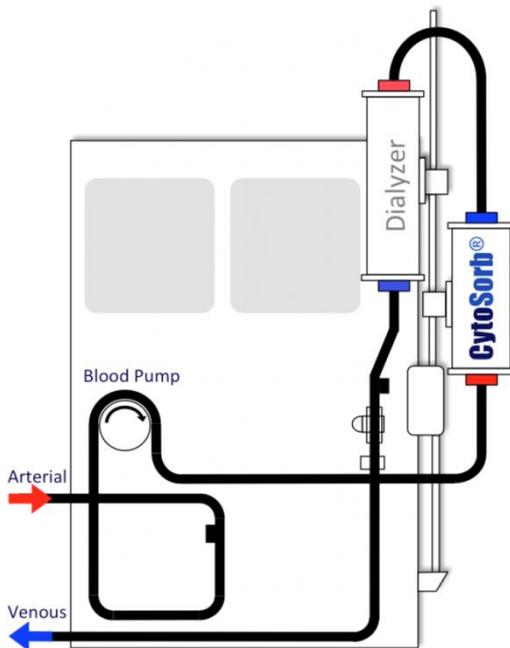


- Protected by 32 issued US patents* and multiple applications pending worldwide
- Manufactured at our ISO 13485 certified facility in New Jersey
- One of the highest grade medical sorbents on medical market today

* See 2016 Form 10-K for patent portfolio and patent life

CytoSorb is “Plug and Play”

Compatible with Existing Dialysis and Heart-Lung Machines



- Place a temporary dialysis catheter in a major vein
- Connect the device to a standard dialysis or heart-lung machine 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 hour treatment
- Each treatment uses a new cartridge

Product Pipeline

CytoSorb

Dual-Track Approval and Development in Two Distinct Settings

Critical Care

Cardiac Surgery

EU:

- CE Mark approved for broad indication in diseases where cytokines are elevated
 - Including, but not limited to, critical illnesses such as sepsis, trauma, liver failure, autoimmune disease flares, cancer cachexia, and many other conditions where cytokine-induced inflammation plays a detrimental role

US: (preliminary trial design pending anticipated meeting with FDA in Q2 2017)

- RCT, PMA trial using CytoSorb intra-operatively during complex cardiac surgery to reduce post-op adverse events
- Targeting 2H 2017 start, 2020 approval

Late-Stage Pipeline

CytoSorb-XL

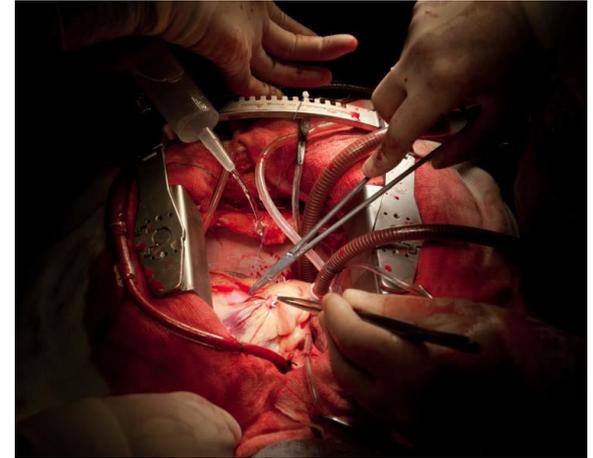
- Next generation product to CytoSorb under development, adding endotoxin removal capability to cytokine, exotoxin, and other inflammatory mediator removal

HemoDefend

- Development-stage blood purification system that can remove contaminants in transfused blood products, with the goal of reducing potentially fatal transfusion reactions and improving the quality of blood

Cardiac Surgery Drives Dangerous Inflammation

- Heart disease is the leading cause of death worldwide driven by smoking, unhealthy lifestyles, and an aging population
- ~1M cardiac surgeries performed annually in U.S. and E.U.
 - 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 activated complement



Severe inflammation, nitric oxide scavenging, and reduced blood flow can lead to kidney, lung, and/or heart failure in many patients following surgery

U.S. REFRESH 1 Trial – Safety Confirmed

REduction in FREe Hemoglobin



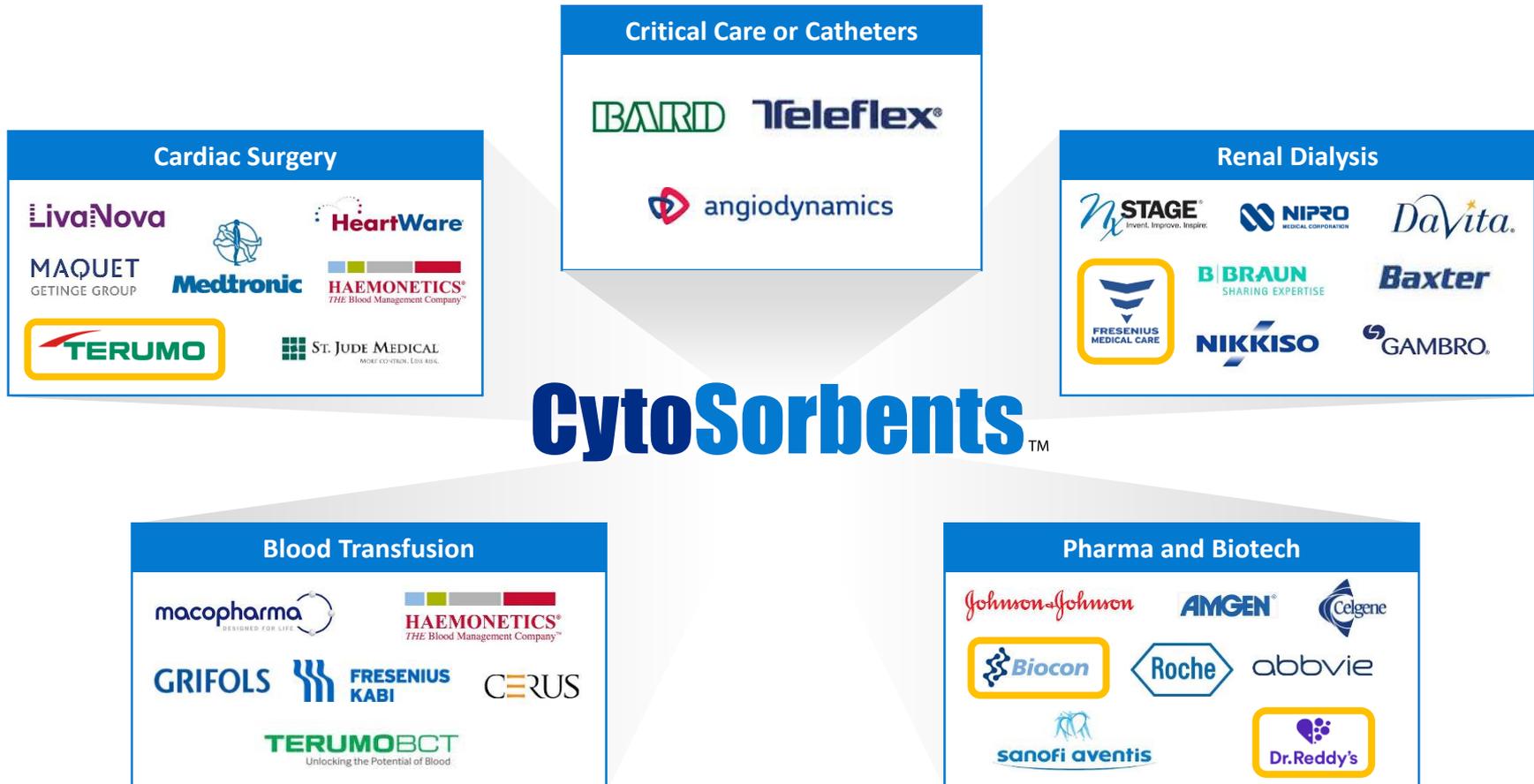
- 46-patient, eight-center trial evaluating the safety and efficacy of intra-operative use of CytoSorb® in a heart-lung machine during complex cardiac surgery in elective, non-emergent cardiac surgery ≥ 3 hours
 - Applicable types of procedures: Aortic reconstruction, CABG redos, multiple valve replacements, 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 plasma free hemoglobin (pfHb) levels
- In this first RCT using CytoSorb in high risk cardiac surgery, we have:
 - Demonstrated safety of the therapy
 - Identified valve replacement patients who are the highest levels of peak pfHb which can be used to enrich future studies for those at greatest risk of organ injury
 - Demonstrated that CytoSorb significantly reduces pgHb and activated complement during treatment
- Data from the REFRESH 1 Trial was submitted as a late-breaking abstract and was selected for podium presentation at the American Association of Thoracic Surgery (AATS) conference on May 1, 2017. The paper has been submitted for publication

U.S. REFRESH 2 Pivotal Trial



- Plan to meet with the FDA in the near term to confirm the clinical trial strategy and expect to design trial to seek approval of CytoSorb in the U.S. for the application of cardiac surgery
 - Expect to start the pivotal REFRESH 2 trial in 2H 2017
- REFRESH 2 is expected to be similar in design to REFRESH 1, but with a more focused target population that accounts for more than half of all complex cardiac surgeries that demonstrated the highest levels of pfHb and are at greatest risk for organ injury
- Preliminary trial design, pending discussions with the FDA:
 - Plan to start with core sites from REFRESH 1
 - 300-500 patient, 30-40 center randomized, controlled PMA trial
 - Primary clinical and cost-effectiveness endpoints: Progression to acute kidney injury (AKI), incidence of stroke, time on mechanical ventilation, hemodynamic stability, days in the ICU
 - 2 year expected duration at 0.5 patients/month/site
 - \$10-12M cost spread out over 3 years – potential for strategic partner support
 - Targeting 1H 2019 enrolled, 2H 2019 data, 2020 targeted approval

Four Major Partnerships, Potential for More*

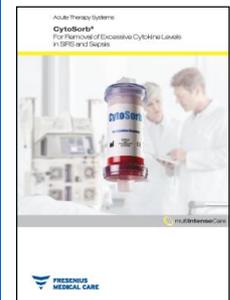


Partnered with leading multinational corporations:
 Fresenius Medical Care, Terumo Cardiovascular, Biocon Ltd, and Dr. Reddy's Laboratories

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

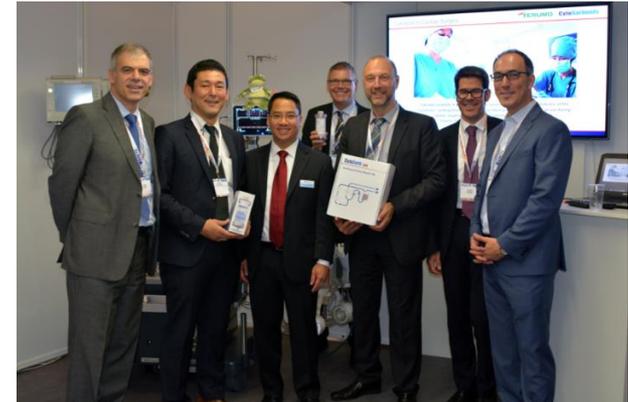
Expanded Fresenius Partnership

- CytoSorbents renewed and expanded its partnership with Fresenius Medical Care in January 2017
- Extension on exclusive distribution of CytoSorb for critical care applications in France, Poland, Denmark, Norway, Sweden, and Finland through 2019
- Guaranteed minimum quarterly orders and payments of CytoSorb evaluable every 1.5 years
- Co-marketing agreement across all of the countries where CytoSorb is sold, where possible
 - May increase the “effective” sales force in each country
 - Fresenius to provide written endorsement of CytoSorb for the multiFiltrate platform
 - Jointly developed marketing materials



Launched in December

- Entered into a multi-country strategic partnership with Terumo Cardiovascular Group, a global leader in medical devices for cardiac and vascular surgery
- Initial exclusive distribution of CytoSorb® CPB Procedure Pack for intra-operative use during cardiac surgery in France, Denmark, Norway, Sweden, Finland, and Iceland
- Launched December 2016
- We believe this strategic partnership has the potential to validate our technology and opens the door to potential expansion to other countries, such as Japan – the second largest medical device market in the world



CytoSorb® Distributed in 43 Countries



Dr.Reddy's



HOANG LONG PHARMA

IntensivMed



TekMed



WMC

Direct Sales: Expanded to 5 Countries

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



Dr. Christian Steiner, MD
Vice President – Sales and Marketing and General Manager
CytoSorbents Europe GmbH



Stefan M. Baudis
International Sales Director



Dr. Joerg Scheier, MD
Senior Medical Director Europe



Dr. Volker Humbert, MD
Senior Manager - Clinical Affairs



Dominik Gutzler
Head of Product Management



Dr. Rainer Kosanke, PhD
Director Scientific Affairs Europe



Alexandru Bojan
Regional Sales Director



Adrian Thomas
Regional Sales Director



Linus Khoo
Regional Sales Director



Hans-Juergen Kraus
Regional Sales Manager
Southern Germany



Matthias Hoeldtke
Regional Sales Manager
Southeast Germany



Uwe Gerks
Regional Sales Manager
Northern Germany



Andreas Gassmann
Sales Representative
Southern Germany



Christian Koptik
Regional Sales Manager
Austria



Martin Scherer
Regional Sales Manager
Southwest Germany



Andreas Pendleder
Regional Sales Manager
Western Germany



Steffen Martens
Regional Sales Manager
Northeast Germany



Oliver Lupoli
Country Sales Manager
Switzerland



Brigitta Waldmueller
Application Specialist
Austria



Eva Wechsler
Application Specialist



Fernanda Goncalves Zawieja
Sales Assistant/Customer Support



Petra Hoffman
Sales Assistant/Customer Support



Anke Applehoff
Application Specialist



Franziska Preissing
Senior Manager – Reimbursement & Health Economics



Kristin von Hammerstein
Marketing Manager



Harriet Adamson
Clinical Research Manager



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 Europe
- We believe this has the potential to validate the importance of our therapy to physicians in the country
- Was achieved rapidly through the initiative and strong support of several major medical societies across different medical specialties
- Effective January 1, 2017, we are already seeing that the new code has resulted in higher reimbursement compared to the more generic code we have used, which we believe in many cases led to inadequate reimbursement, impeding usage and sales
- The company expects that the new code will catalyze increases in usage and sales of CytoSorb in Germany, and positively impact reimbursement in other countries

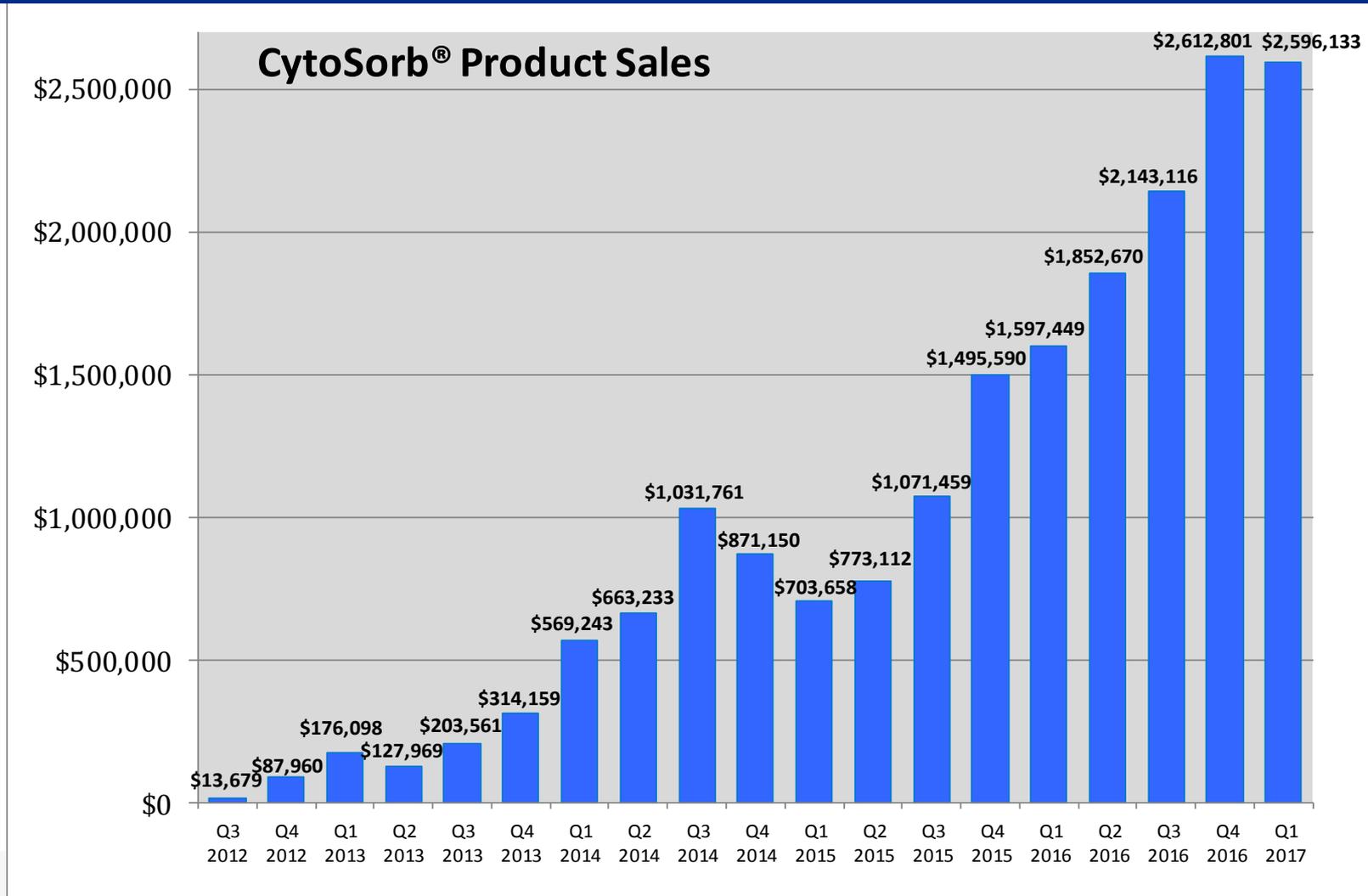
CytoSorb® Is Like a High Margin Razorblade

- CytoSorbents is a pure play high margin disposables business where the CytoSorb “razorblade” is fully compatible with the existing installed base of “razor” ICU dialysis and ECMO machines, and heart-lung machines in the operating room
- Blended gross margins are 68%, but with economies of scale and manufacturing efficiencies, this is expected to increase
- Average Direct 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 is expected to see 300, up to 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
- One hospital in Germany had achieved sales of >\$1M in 2016, demonstrating early validation of this model

Quarterly Product Sales

Product gross margins were approximately 68% for Q1 2017

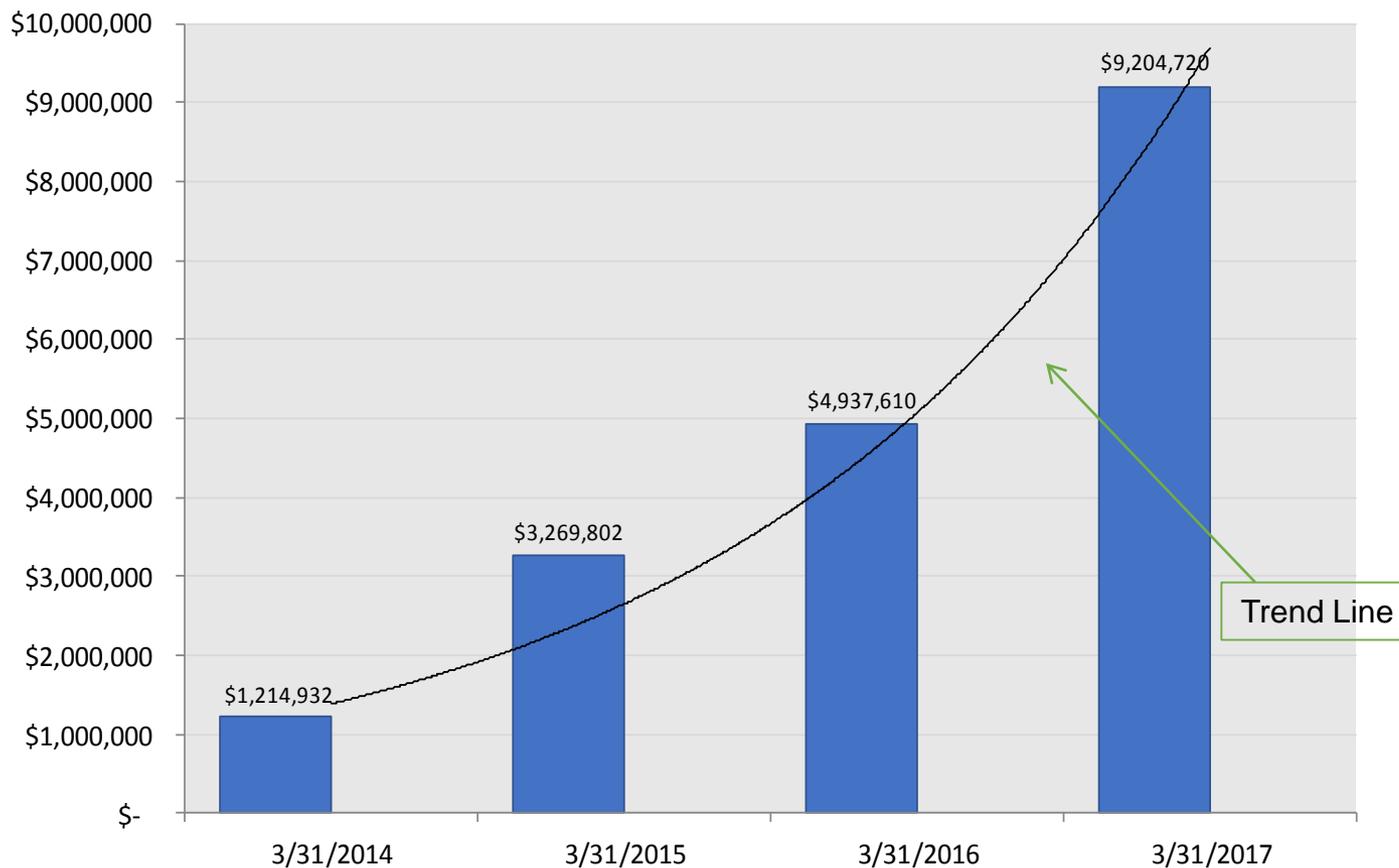
CytoSorb® Product Sales



Trailing 12-month Product Sales

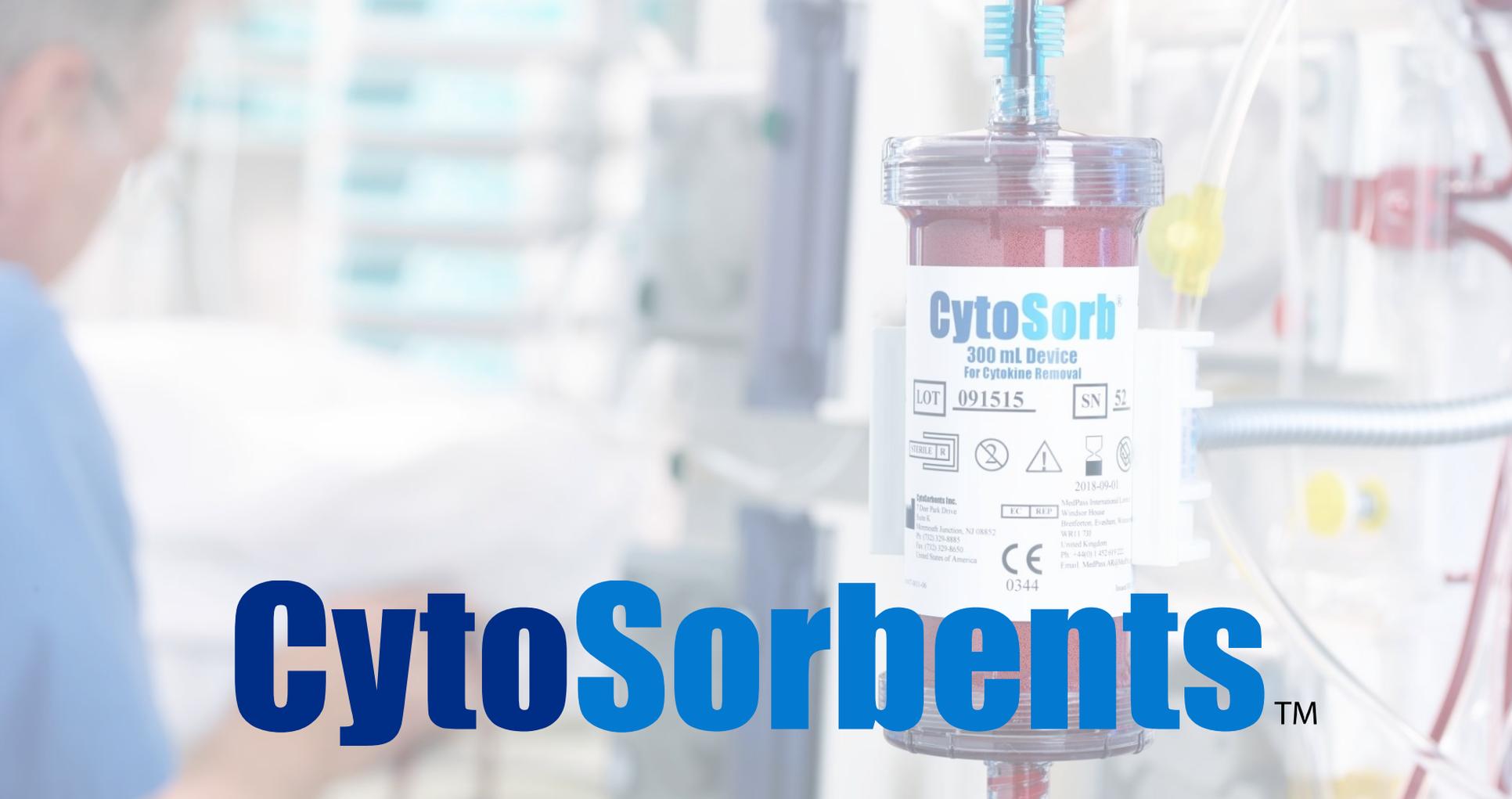
CytoSorb® Product Sales

CytoSorb® Product Sales for the Twelve Months Ended



Financial Summary

Basic Shares Outstanding	28,108,555
Fully Diluted Shares Outstanding	32,877,189
Share Price (5/23/17)	\$4.20
Market Cap (5/23/17)	\$118.0M
Cash & Equivalents	\$3.2M (as of 3/31/17)
Total Debt	\$5.0M (as of 3/31/17) <i>\$5M additional draw available under Bridge Bank Facility</i>
2016 Cash Burn	(\$6.7M)



CytoSorb[®]

300 mL Device
For Cytokine Removal

LOT 091515 SN 52

STERILE R

2018-09-01

MedPass Inc.
One Park Drive
Suite 100
Horseshoe Junction, NJ 08852
Ph: (732) 329-8885
Fax: (732) 329-8630
United States of America

EC REP

MedPass International Limited
Windsor House
Bretford, Evesham, Warwick
WR11 7JL
United Kingdom
Ph: +44(0)1452419222
Email: MedPass.AB@medpass.com

CE 0344

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