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CytoSorbents Corporation

Third Quarter 2022 Earnings Conference Call

November 3, 2022

Conference Call Participants

Moderator: Michelle Almonte
CytoSorbents Corporation

Phillip Chan, MD, PhD – Chief Executive Officer

Vincent Capponi, MS – President and Chief Operating Officer

Kathleen Bloch, MBA, CPA – Chief Financial Officer

Efthymios "Makis" Deliargyris, MD, FACC, FESC, FSCAI – Chief Medical Officer

Christian Steiner, MD – Executive Vice President of Sales and Marketing and Managing Director – CytoSorbents Europe GmbH

Christopher Cramer, MS, MBA – Vice President of Business Development

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 2021 Form 10-K filed with the Securities and Exchange Commission on March 10, 2022, and other reports and documents filed from time to time by us, which are available online at www.sec.gov.

Operational Update

Phillip Chan, MD, PhD
Chief Executive Officer

Recent Operational Highlights

- More than 186,000 cumulative CytoSorb devices utilized as of 9/30/22, from >152,000 last year
- Announced final key data from the U.S. CTC Registry on 100 critically ill COVID-19 patients with refractory respiratory failure from 5 sites, where Enhanced Lung Rest with CytoSorb and ECMO led to 90-day survival of 74%, and where early intervention yielded better clinical outcomes
- Achieved ISO 13485 Certification of Princeton, NJ manufacturing facility
- CytoSorb granted reimbursement from Israeli Ministry of Health for cardiothoracic surgeries and from Turkish Ministry of Health for critical care and cardiothoracic apps
- HemoDefend-BGA for universal plasma received two U.S. DoD funding awards:
  - $2.0M 2-year award to develop commercial-ready devices for pre-clinical porcine study
  - $4.3M 3-year award to customize a device to enable freeze-dried universal plasma
- Released new cardiac surgery data at EACTS 2022, highlighting new data in S. aureus endocarditis, heart transplantation, and antithrombotic drug removal
- Received a $282K award from NIH to test new and existing polymers for cytokine and LPS endotoxin removal to advance new treatments for deadly Gram negative sepsis

Financial Highlights

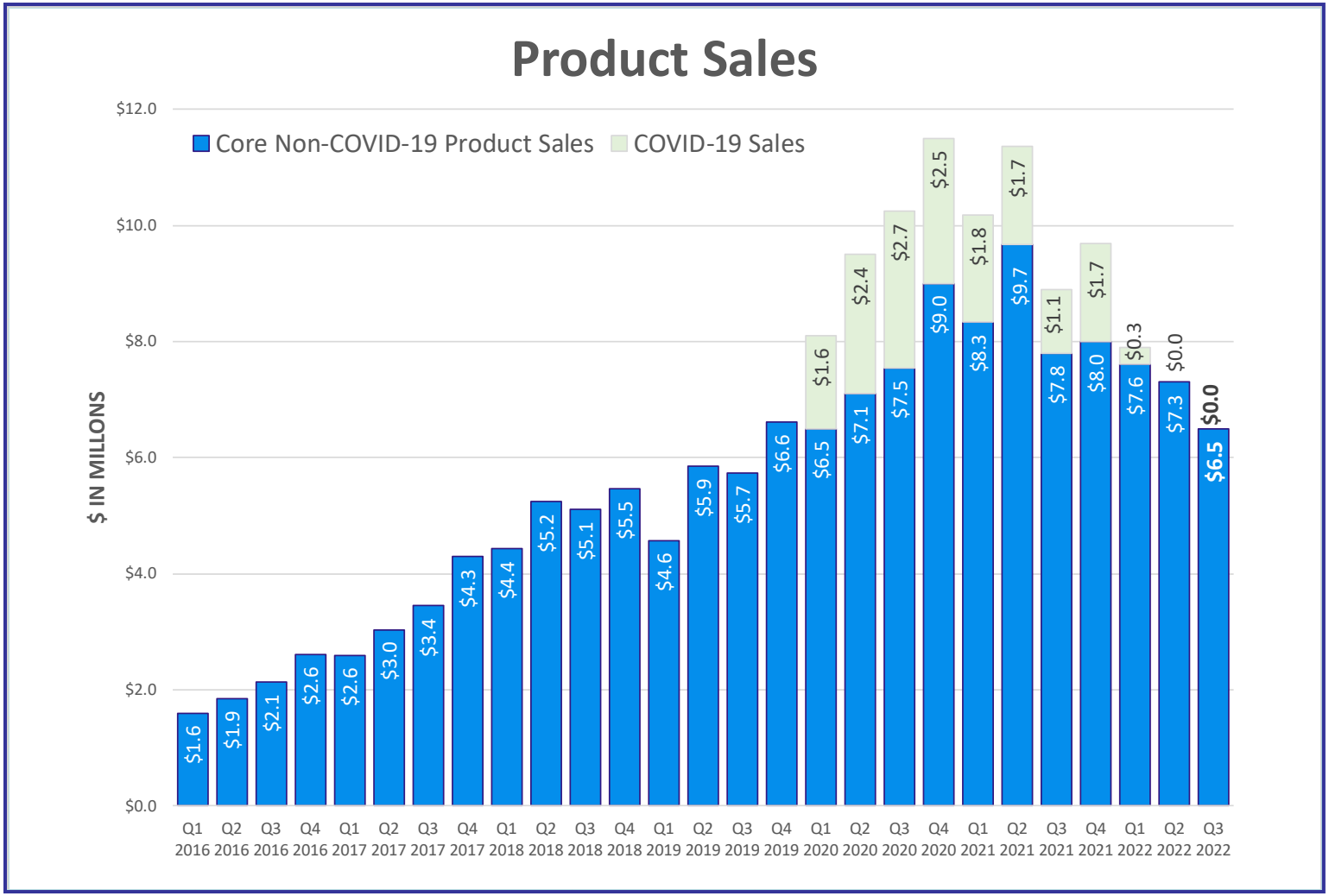
Kathleen Bloch, MBA, CPA
Chief Financial Officer

Q3 2022 Comparative Revenue Results

	Quarter Ended Sept. 30, 2022		Quarter Ended Sept. 30, 2021		Y-Y % Trend
Product revenue	$6.5M		$8.9M		(27%)
Grant income	$1.6M		$0.9M		92%
Total revenue	$ 8.1M		$ 9.8M		(17%)

- Total revenue, including product sales and grant income was $8.1M in Q3 2022 compared to $9.8M for Q3 2021
- Product sales for Q3 2022 were $6.5M as compared to $8.9M product sales in Q3 2021
- The decrease in the average Euro to US dollar lowered Q3 2022 product sales by approximately $771K.
- COVID-19 sales were negligible during Q3 2022 as compared to $1.1M in Q3 2021.
- On a constant currency basis, Q3 2022 core non-COVID sales were $7.2M, which represents a 7% decrease from $7.8M in core non-COVID sales a year ago.
- Grant income was $1.6M in Q3 2022 as compared to $859K in Q3 2021, an increase of 92%.

Quarterly Product Sales



Negligible COVID-19 sales in 2022, compared to ~$6.3M in 2021.
Not adjusted for currency exchange fluctuation

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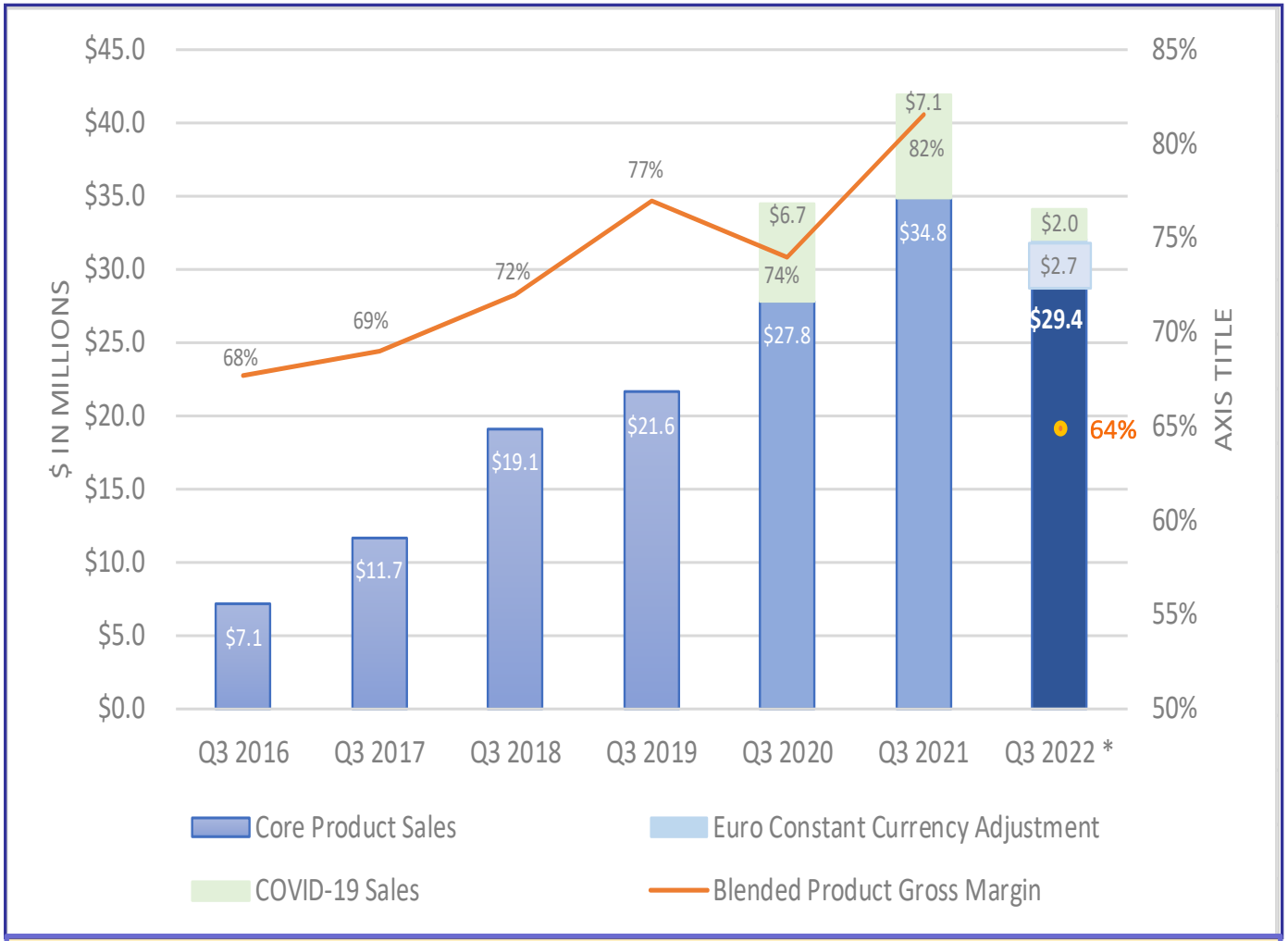
Trailing Twelve Month Product Sales



*Q3 2022 GM shown of 64% excludes an approximately $600K write off associated an equipment failure of a refrigeration unit. The Company is seeking reimbursement of this loss through its insurance carriers.

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Working Capital and Cap Table

Working Capital as of	9/30/2022	6/30/2022	3/31/2022	12/31/2021	9/30/2021	6/30/2021	3/31/2021
Current Assets:							
Cash and short-term investments*	$22,552	$30,164	$43,023	$52,138	$61,043	$65,609	$68,468
Grants and accounts receivable, net	4,961	5,171	4,577	4,523	5,241	5,755	5,019
Inventories	3,542	4,980	5,445	4,766	4,528	3,689	3,108
Prepaid expenses and other current assets	1,326	1,331	2,809	2,872	1,940	2,032	3,040
Total current assets	32,381	41,647	55,854	64,299	72,752	77,085	79,635
Current Liabilities:							
Accounts payable	2,348	2,129	4,826	2,805	3,358	2,166	1,678
Accrued expenses and other current liabilities	7,394	8,007	9,359	10,314	7,447	8,378	7,619
Current maturities of long-term debt	-	-	-	-	-	-	-
Lease liability - current portion	377	417	487	571	266	252	463
Total current liabilities	10,119	10,554	14,672	13,690	11,070	10,796	9,759
Net Working Capital	$ 22,262	$ 31,093	$ 41,182	$ 50,609	$ 61,681	$ 66,289	$ 69,876
*Cash and short-term investments exclude restricted cash of $1.7M							

Cap Table 9/30/2022

	Fully Diluted Common Shares
Common Stock	43,634,845
Options	8,175,890
Restricted Stock Unit Awards	313,342
	52,124,077

Extending the Cash Runway

- We have $24.2M in cash at September 30, 2022. We intend to further bolster our working capital by borrowing a portion of the $15M available debt facility before the end of 2022
- Cash conservation is a corporate priority, and we are continuing to focus on controlling expenses
- Already during 2022, we have
  - Reduced our overall headcount by 10%
  - Shifted our R&D headcount to grant-funded programs, with an extensive $13.2M backlog
- Going forward we will continue to identify potential cost savings opportunities to reduce our cash burn
- Our spend is laser-focused on and fully-aligned with our strategic priorities, in particular, our STAR-T trial designed to support US FDA marketing approval
- Our goal is, through a combination of driving an increase in sales and gross margin, along with with cost cutting measures, to significantly reduce our cash burn and to extend our operating runway

Commercialization Update

Christian Steiner, MD
Executive Vice President of Sales and Marketing
Managing Director – CytoSorbents Europe GmbH

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State of the CytoSorb community

- High number of activities and customer interaction fuel the excitement
- Growing support by key opinion leaders
- Increasing involvement in CytoSorb projects / therapy optimization

Growth opportunities and initiatives

- Collaboration with Fresenius Medical Care (FMC)
- Stand-alone blood pump strategy
- Additional application fields at our Therapeutic Areas

CytoSorb movement is growing

CytoSorb World Users Meeting, July 1-3, Berlin, Germany

- 300 KOLs from 39 countries; 26 speakers
- Preview of new data sets in four different applications

Italian Users Meeting (Aferetica), Sept 30/Oct 1, Milano, Italy

- Focus on CytoSorb and Extracorporeal Organ Perfusion
- >300 participants from 30 countries; 30 speakers, >80 posters
- Presentation of new data in transplant organ perfusion

Excitement at several conferences

Critical Care

- COVID19 on ECMO+CytoSorb (CTC Registry) at ELSO in Boston, USA, and at ESICM in Paris, France

Cardio Vascular

- Infective Endocarditis at EACTS in Milano, Italy
- Heart Transplantation at EACTS in Milano, Italy

Liver / Kidney

- Myoglobinemia at HAI in Berlin, Germany

Transplantation

- Lung transplant perfusion at Austrotransplant, Austria

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Excitement at several (many) conferences

Conferences

- Intensivmed Regensburg | 15. – 16.07.2022 | Germany
- Herzanästhesie Graz | 24. – 25.06.2022 | Germany
- Bielefelder Infektiologie- und Intensivtag | 27.08.2022 | Germany
- BTS | 05.-07.09.2022 | Belfast
- SATS Helsinki | 07. - 09.09.2022 | Finland
- AIC | 08.-10.09.2022 | Austria
- Allergology and Immunology | 08.-11.09.2022 | Switzerland
- HAI Berlin | 14. – 16.09.2022 | Germany
- SGI | 14.-16.09.2022 | Switzerland
- Cardiovascular Summit Cologne | 16. – 17.09.2022 | Germany
- ÖGIM Salzburg | 22.-24.09.2022 | Austria
- Hamburger Einführungskurs Intensivmedizin | 23. – 25.09.2022 | Germany
- Polytraumasymposium | 23.09.202 | Germany
- Polytraumasymposium Oldenburg 2022 | 23.09.202 | Germany
- Hamburger Einführungskurs 2022 | 23.-25.09.2022 | Germany
- DGK Herztage | 29.09.2022 | Germany

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Growth opportunities and initiatives

Global marketing agreement with FMC

- Expanding the dimensions of blood purification
- CytoSorb as featured solution for FMC customers
- Amplification of message / Awareness / Reach / Access

Stand-alone blood pump strategy

- Early stage of rollout, testing different offerings to customers
- Has potential to drive early and greater usage of CytoSorb
- Expands target market to an estimated 30-40% of patients in the ICU

Therapy area focus in Critical Care, Cardiovascular, and Liver & Kidney

- Seeing benefits of dedicated focus to these areas
- CytoSorb has strong marketing message as the most capable, easy-to-use extracorporeal liver support therapy

Partnerships with Asklepios and Helios

- Two largest private hospital networks in Germany – opening doors to many new accounts
- Focus on reducing costs and improving clinical outcomes

Additional application fields at our Therapeutic Areas

- Lung failure and dysfunction
- Heart failure and heart transplantation
- Kidney protection in myoglobinemia
- Transplantable perfusion / protection

Clinical and Medical Update

Efthymios N. Deliargyris, MD, FACC, FESC, FSCAI
Chief Medical Officer

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Visibility & Prioritization

- STAR-T is our “lead horse” to U.S. market and we are prioritizing resources to ensure speedy execution
- STAR-T enrollment uptick with milestone #1 (n=40; DSMB) this month
- FDA approval received to expand STAR-T to Canada, a ticagrelor “hotbed”
- With better visibility now, we are projecting STAR-T completion next summer
- STAR-D activities will temporarily “pause” to focus on STAR-T acceleration and cash preservation; STAR-D resumes as STAR-T crosses finish line
- STAR registry enrolling fast, highlighting the increasing penetration of ATR in the real world based on dominant clinical and economic value proposition
- Continuous flow of positive data with CytoSorb in cardiac surgery and critical care with 20+ presentations and publications this year
- CTC Registry results presented at ESICM with excellent outcomes with our pioneering “enhanced lung rest” strategy combination of CytoSorb+ECMO in severe respiratory failure (ARDS)

STAR-T now with Visibility

- Increased number of study sites contributing with an uptick in enrollment
- Milestone #1 (n=40) this month (PR to follow) triggering 1st DSMB review
- FDA approval for Canada expansion. Potentially an important tailwind, since:
  - Canada is a Ticagrelor "hotbed" - ACS protocols endorse early ticagrelor use
  - Canadian sites have an excellent track record as lead enrollers in CT surgery trials
  - Dr. Richard Whitlock MD, PhD, FRCSC will be Canada PI. Renowned investigator with established site network (Population Health Research Institute; PHRI)
- Canadian sites projected to begin enrolling in January '23
- With increased visibility we can now project timeline to milestone completion:

Milestone	Enrollment target	Triggered Action	Projected timeline
1st	40	1st DSMB Safety review	November 2022
2nd	80	2nd DSMB + Interim analysis (IA)	Spring 2023
3rd	120	Study completion (unless stopped at IA)	Summer 2023

STAR-T: Rationale for focus and acceleration

- STAR-T now executing well - we will devote our full attention and resources to fuel this momentum and speed up study completion
- Canadian expansion with new Canadian ARO partner is projected to further accelerate enrollment, but to also has positive downstream implications for Canadian approval for DrugSorb-ATR
- Speed to market is desirable to capitalize on this growing opportunity:
  - Ticagrelor generic availability globally in 2024 (lower cost barrier)
  - Ticagrelor monotherapy increasingly considered by cardiologists as better than aspirin for CV protection in high-risk patients. This treatment paradigm shift may change ticagrelor use from 1 year, to lifelong therapy
- First mover advantage - Recent events and competitive dynamics
- And finally, broad and enthusiastic adoption for ATR in the real world. International STAR registry ahead of schedule with 125 patients enrolled and first data readouts already submitted to conferences

STAR-D Update

- With our focus now on speeding up STAR-T completion, we will shift from a parallel to a sequential execution of the two studies
- Accordingly, STAR-D activities will pause this month
- There are no clinical/safety issues - This is solely a business decision
- We remain fully committed to STAR-D and will resume activities once STAR-T crosses the finish line, or when our financial position improves, whichever comes first
- We anticipate minimal impact on sites since almost all of them (>90%) will remain active and focused on accelerating STAR-T enrollment
- We will take advantage of this pause to fine tune the study based on learnings to date and introduce any necessary “fixes” to ensure speedy enrollment once study activities resume
- We’ll observe significant savings for 2023 estimated at approximately $4M

Cardiac Surgery: Positive New Data (EACTS)

Staph Aureus Endocarditis

- Better postoperative hemodynamic stabilization
- 63% reduction in sepsis-related mortality
- 47% reduction in 90-day overall mortality

- NNT of 5 to save a life

Antithrombotic Removal

- 67% fewer transfusions
- 60% less chest tube drainage
- No re-operations (100%RRR)
- 50% fewer days in ICU

- 4,200 Euro cost reduction (inclusive of device cost)

Heart Transplant

- 58% lower rates of postoperative vasoplegia
- 62% shorter time on mechanical ventilation
- 52% less acute kidney injury

- 3.5 fewer days in the ICU

Robust clinical and economic benefits across multiple cardiac surgery applications establishing a dominant value proposition

Critical Care: Final CTC Registry Results (ESICM)

Adjunctive hemoadsorption in critically ill COVID-19 patients requiring extracorporeal membrane oxygenation (ECMO): The CytoSorb® Therapy in COVID-19 patients (CTC) multicenter registry

J. Hayanga[1], T. Song[2], L. Durham[3], L. Garrison[4], C. Eke-Okoro[5], J. Scheier[6], Z. Molnar[6,7], E. Deliargyris[5], N. Moazami[8]

[1]West Virginia School of Medicine, Morgantown, WV, United States
[2]University of Chicago Medicine, Chicago, IL, United States
[3]Medical College of Wisconsin, Milwaukee, WI, United States
[4]Franciscan Health Indianapolis, Indianapolis, IN, United States
[5]CytoSorbents Corporation, Princeton, NJ, United States
[6]CytoSorbents Europe, Berlin, Germany
[7]Semmelweis University, Budapest, Hungary
[8]New York University School of Medicine, New York, NY, United States

CTC
CytoSorb® Therapy in COVID-19

100 patients
5 US Centers

"Enhanced lung rest"
ECMO + CytoSorb

INTRODUCTION

CytoSorb® has received FDA emergency use authorization (EUA) to reduce hyperinflammation in COVID-19 patients and the CTC (CytoSorb® Therapy in COVID-19) registry collects patient-level data for its use. Preliminary results were published previously. [1]

OBJECTIVES

To evaluate the clinical performance of ECMO-integrated CytoSorb® hemoadsorption in critically ill COVID-19 patients. We have previously reported a 90-day survival of 73.1% in the first 52 patients enrolled in the Registry. [1]

The current analysis extends the observations to the full CTC Registry cohort.

METHODS

Patients on ECMO also treated with CytoSorb® at 5 U.S centers were included in the analysis. Survival was evaluated with a time-to-event analysis.

Available data on CytoSorb® and ECMO treatment parameters, inflammatory markers, pulmonary function were collected and compared between survivors and non-survivors.

For context, reported survival from the International COVID-19 ECMO ELSO-registry (n = 13,864; April 4, 2022) is referenced.

References
1. Song et al. Frontiers in Medicine, 2021. |doi.org/10.3389/fmed.2021.773461|
2. Extracorporeal Life Support Organization (ELSO): COVID-19 Registry Dashboard. Accessed 14.03.2022, 2022

RESULTS

A total of 100 patients were included. Survivors were younger, the rest of the baseline characteristics were balanced between groups and are summarised in Table 1.

In survivors, CytoSorb® was initiated earlier after ICU admission. There was a non-significant reduction in D-dimer, and significant improvement in CRP and ferritin levels and in the PaO_2/FiO_2 ratio by day 3 of CytoSorb® treatment and survivors received ECMO for shorter period as compared to non-survivors (Table 2).

Among survivors, those who initated CytoSorb® before the median start time of <=86.7 hours, had significantly shorter duration on ECMO (532.76 ± 533.05 vs. 800.74 ± 701.67 hours; p=0.0213).

Patient disposition and survival rates (86% at 30 and 74% at 90 days) are depicted in Figures 1 and 2. As comparison, in the North American International ELSO registry's COVID-19 population survival was 52%. [2]

Device related adverse events were not reported by any of the centres.

Table 1. Demographics and baseline characteristics

	Full cohort (n=100)	Survivors (n=70)	Non-survivors (n=30)	P-value
Age (years), mean ± SD	44 ± 11	42 ± 11	48 ± 8	0.01
Female (%)	37.0	42.9	23.3	0.06
BMI (kg/m²), mean ± SD	34.4 ± 6.3	34.9 ± 6.5	34.6 ± 5.7	0.32
SOFA, mean ± SD	6 ± 4	6 ± 4	7 ± 4	0.43
D-Dimer (µg/mL), median (IQR)	2.11 (1.29-5.57)	2.05 (1.40-4.02)	5.25 (1.25-9.40)	0.22

Figure 1. Stacked area graph of patient disposition after starting CytoSorb®

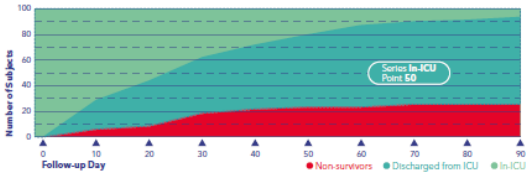
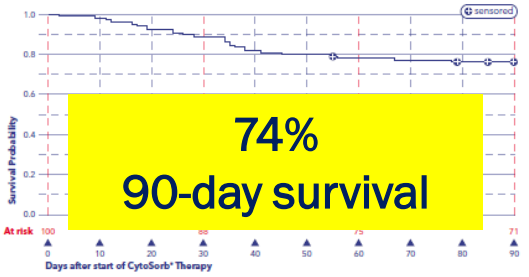


Table 2. Outcomes in Survivors vs. Non-survivors

	Survivors (n=70)	Non-survivors (n=30)	P-value
Time to therapy after ICU admission hours, median [IQR]	64 [34-161]	151 [44-260]	0.007
PaO2/FiO2 - day 3 mmHg, mean ± SD	206 ± 196	142 ± 111	0.027
D-dimer - day 3 µg/mL, median [IQR]	1.99 [0.77-3.52]	3.23 [1.01-5.62]	0.10
CRP-day 3 mg/dL, median [IQR]	6.9 [2.1-11.0]	9.5 [6.0-17.1]	0.04
Ferritin - day 3 ng/mL, median [IQR]	743.0 [339.5-1237.0]	1622.0 [986.0-3411.0]	0.0002
Total ECMO time hours, median [IQR]	302 [161-932]	630 [268-1187]	0.04

Figure 2. A: Kaplan-Meyer curve for survival



74%
90-day survival

CONCLUSIONS

The current results suggest that CytoSorb® Therapy in critically ill COVID-19 patients on ECMO support is **easy to implement, safe and associated with high (74%) survival at 90 days as compared to ELSO data.** [2]

Early initiation of CytoSorb® Therapy appears to be a key feature underlying the observed favorable outcomes and may also help **reduce organ support requirements** in this extremely sick patient population.

These data lend support to the concept of **enhanced lung rest** using CytoSorb® with ECMO, a new intriguing approach to treating ARDS.

- Largest and only multicenter ECMO+CytoSorb dataset
- Higher survival than ECMO alone (ELSO Registry 52%)

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Clinical/Medical Summary

CLINICAL:

- STAR-T accelerating plus new tailwind coming with addition of Canada
- STAR-T with increased visibility - Milestone #1 this month; Milestone #2,3 next spring and summer respectively
- Speedy execution of STAR-T top priority to capitalize on favorable dynamics
- STAR-D pause increases focus on STAR-T and contributes significant cost savings in 2023 (est. $4M).
- STAR Registry ahead of schedule - ATR increasingly SOC in real world practice

MEDICAL:

- Business support remains top priority of our therapeutic area medical teams
- We anticipate increasing adoption of our therapy in 2023 based on:
  - Multiple new and positive data presented at international conferences
  - Large number of new, positive publications in top tier journals

Business Development

Chris Cramer, MBA
Vice President, Business Development

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Emerging New Opportunities to Expand the Pool of Transplantable Organs with Ex-Vivo Perfusion and CytoSorbents Technology

High Demand for More Transplants

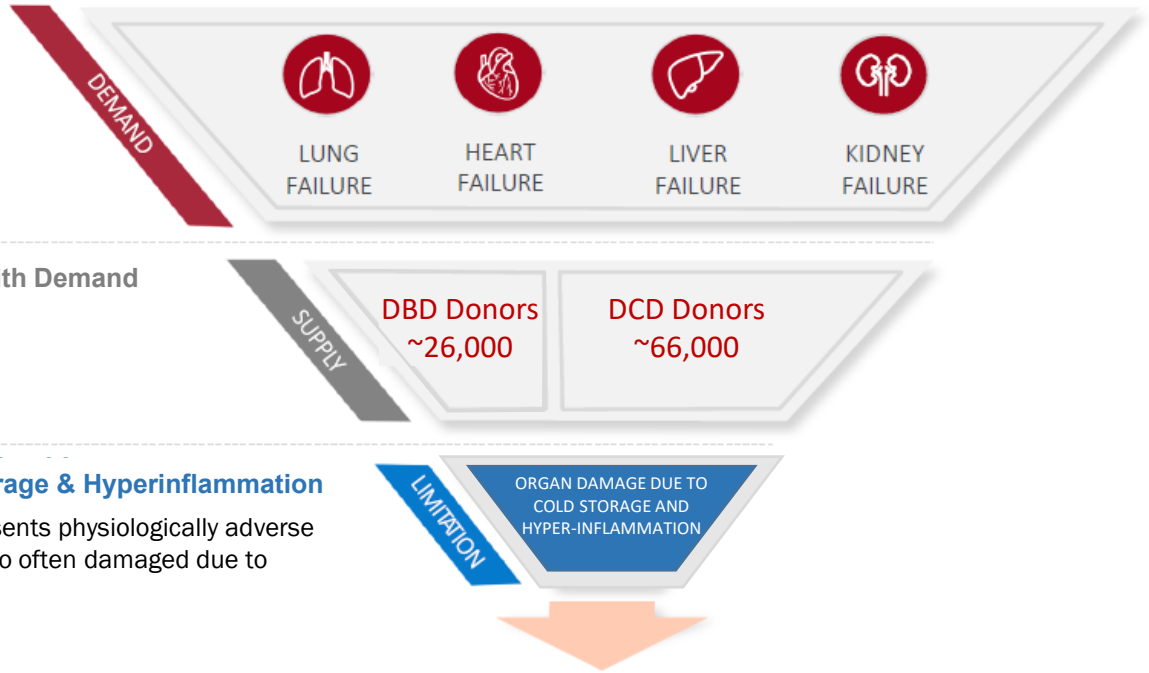
~165,000 US and EU patients on transplant waiting list

Annual Supply of Donors not Keeping Pace with Demand

DBD: Donor after Brain Death
DCD: Donor after Circulatory Death

Low Utilization Due to Limitations of Cold Storage & Hyperinflammation

Static Cold Storage (SCS), the standard of care, presents physiologically adverse conditions for the organ and donated organs are also often damaged due to hyperinflammation resulting in low utilization levels



- The global **demand for organ transplantation continues to rapidly outpace the supply** of donor organs
- Static Cold Storage (SCS), the current standard, presents physiologically adverse conditions for the organ; In addition**, donor organs are often irreversibly damaged due to hyperinflammation** resulting in low utilization levels
- As a result, **only 10-30% of donor organs are utilized leading to demand/supply imbalance** in organ transplants
- Ex-vivo perfusion (EVP) aims to preserve or improve organs for transplant; However, **because EVP does not reduce hyper-inflammation, it represents a new opportunity for CytoSorbents technology** to limit irreversible organ damage, restore organ function, and be used as a bridge to transplant by mitigating cytokine release and removing harmful inflammatory mediators

There is Growing Base of Promising EVP Studies for CytoSorbents' Technology in Multiple Solid Organ Types

Lung

nature COMMUNICATIONS

Reduction of primary graft dysfunction using cytokine adsorption during organ preservation and after lung transplantation

Haider Ghaidan[1,2,3,4], Martin Stenlo[2,3,4,5], Anna Niroomand[2,3,4,6], Margareta Mittendorfer[2,3,4], Gabriel Hirdman[2,3,4], Nika Gvazava[2,4,7], Dag Edström[2,3,4,5], Iran A. N. Silva[2,4,7], Ellen Broberg[2,3,4,5], Oskar Hallgren[2,3,4], Franziska Olm[1,2,3,4], Darcy E. Wagner[2,4,7], Leif Pierre[1,2,3,4], Snejana Hyllén[2,3,4,5] & Sandra Lindstedt[1,2,3,4]✉

hemoperfusion. The treatment significantly decreased cytokine levels during EVLP and decreased levels of immune cells post-transplantation. Histology demonstrated fewer signs of lung injury across both treatment periods and the incidence of PGD was significantly reduced among treated animals. Overall, cytokine adsorption was able to restore lung function and reduce PGD in lung transplantation. We suggest this treatment will increase the availability of donor lungs and increase the tolerability of donor lungs in the recipient.

Perfusate adsorption during ex vivo lung perfusion improves early post-transplant lung function

Ilker Iskender, MD, MSc,[a] Stephan Arni, PhD,[a] Tatsuo Maeyashiki, MD,[a] Necati Citak, MD,[a] Mareike Sauer, DVM,[b] Josep Monné Rodriguez, DVM,[c] Thomas Frauenfelder, MD,[d] Isabelle Opitz, MD,[a] Walter Weder, MD,[a] and Ilhan Inci, MD[a]

Conclusions: Implementation of an additional cytokine adsorber has refined the standard ex vivo lung perfusion protocol. Furthermore, cytokine removal during ex vivo lung perfusion improved immediate post-transplant graft function together with a less intense inflammatory response to reperfusion in pigs. Further studies are warranted to understand the beneficial effects of perfusate adsorption during ex vivo lung perfusion in the clinical setting. (J Thorac Cardiovasc Surg 2020;■:)

Kidney

Cytokine absorption during human kidney perfusion reduces delayed graft function–associated inflammatory gene signature

John R Ferdinand [1 2], Sarah A Hosgood [2 3], Tom Moore [2 3], Ashley Ferro [1], Christopher J Ward [1], Tomas Castro-Dopico [1], Michael L Nicholson [2 3], Menna R Clatworthy [1 2]

Haemoadsorption reduces the inflammatory response and improves blood flow during ex vivo renal perfusion in an experimental model

Sarah A Hosgood [1], Tom Moore [2], Theresa Kleverlaan [2], Tom Adams [2], Michael L Nicholson [2]

Liver

A new ex-situ machine perfusion device. A preliminary evaluation using a model of donors after circulatory death pig livers

Davide Ghinolfi[1] | Fabio Melandro[1] | Damiano Patrono[2] | Quirino Lai[3] | Riccardo De Carlis[4] | Stefania Camagni[5] | Alessandro Gambella[6] | Franco Ruberto[3] | Paolo De Simone[1]

Heart

Impact of intraoperative cytokine adsorption on outcome of patients undergoing orthotopic heart transplantation–an observational study

Endre Nemeth [1], Eniko Kovacs [1], Kristof Racz [1], Adam Soltesz [1], Szabolcs Szigeti [1], Nikolett Kiss [1], Gergely Csikos [1], Kinga B Koritsanszky [1], Viktor Berzsenyi [1], Gabor Trembickij [1], Szabolcs Fabry [1], Zoltan Prohaszka [2], Bela Merkely [3], Janos Gal [1]

ECOS-300CY is E.U. Cleared for Ex-Vivo Organ Perfusion and Ready to Support Multiple Partnering Opportunities

- The ECOS-300CY sorbent cartridge has similar cytokine and inflammatory mediator removal capability to CytoSorb, but unlike CytoSorb, was specifically E.U. approved in October 2020 to remove cytokines and inflammatory mediators during *ex vivo* organ perfusion for transplant
- When used in the field of *ex vivo* perfusion, the goal of ECOS-300CY is to limit irreversible organ damage, restore organ function, and be used as a bridge to transplant by mitigating cytokine release and harmful inflammatory mediators
- In the competitive EVP market, we believe ECOS-300CY could provide clinically meaningful benefits and be an important differentiator for ex-vivo perfusion product offerings
- As proof-of-concept, CytoSorbents is providing the ECOS-300CY cartridge, on a non-exclusive basis, under private label (trade name PerSorb®) to Aferetica for use with their PerLife ex-vivo organ perfusion platform for kidney and liver transplant, confirmed interoperability, and is currently available in Italy

Additional Partnering Opportunities Exist Across the Multi-Billion Dollar Organ Transplant Ecosystem

Immunosuppressants

astellas
NOVARTIS
Bristol-Myers Squibb
SANOFI
Roche

Immunomodulators

ALEXION
Biogen
CSL Behring
Biotherapies for Life®
Genentech
SANOFI
NOVARTIS

Organ Procurement Orgs.

AOPO
ASSOCIATION OF ORGAN PROCUREMENT ORGANIZATIONS
UNOS℠
UNITED NETWORK FOR ORGAN SHARING
ESOT
Leading the way in transplantation
Eurotransplant

Ex-Vivo Perfusion Systems

Fresenius Medical Care
XVIVO PERFUSION
TransMedics
Bringing new life to organ transplant™
Organ Recovery systems
BridgeLife
TEVOSOL
TRANSPLANT TECHNOLOGIES

Intensive Care / Organ Support

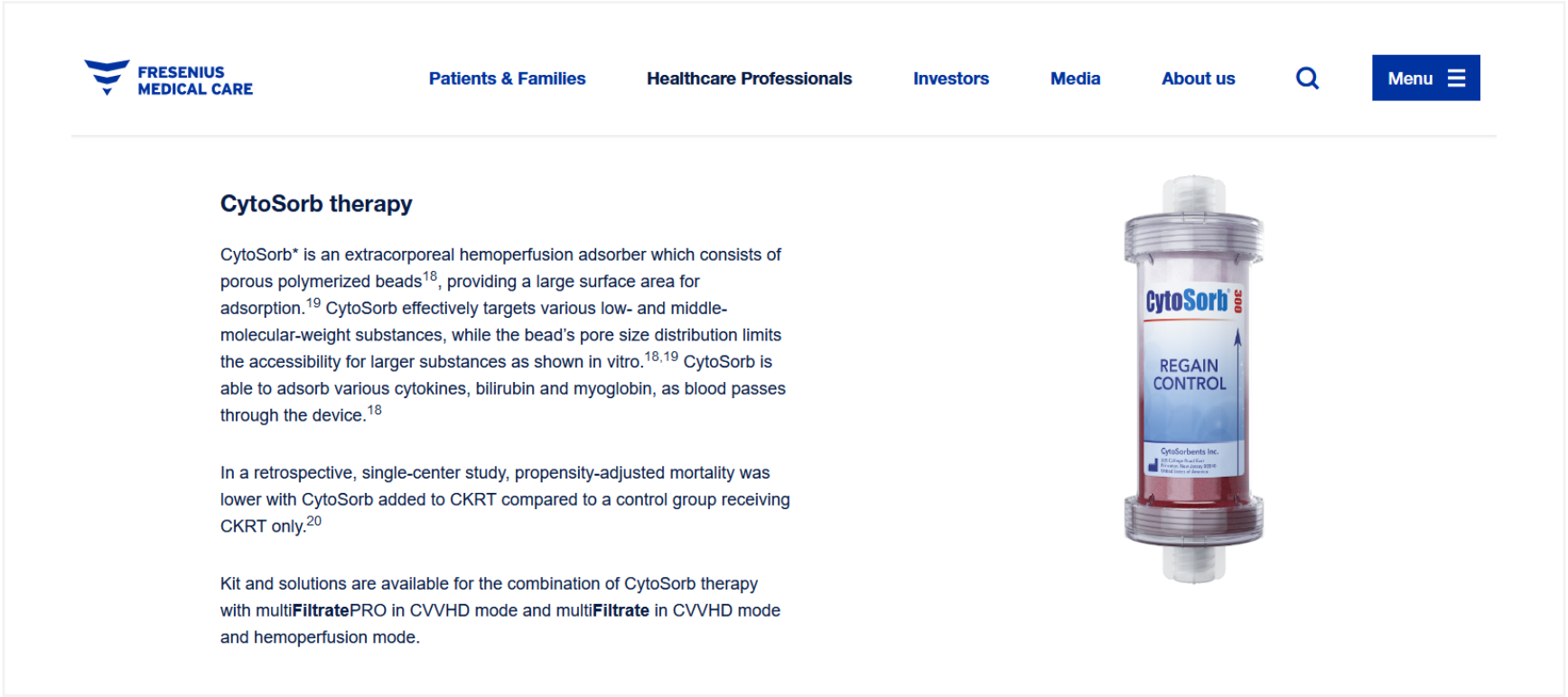
FRESENIUS MEDICAL CARE
NIKKISO
B BRAUN
NIPRO MEDICAL CORPORATION
Baxter

Surgical Equipment

TERUMO
Medtronic
Johnson & Johnson
ABIOMED
MAQUET
GETINGE GROUP
LivaNova
Health innovation that matters

Initiated Global Marketing Efforts with CytoSorb as a Featured Therapy on the FMC Corporate Website

- FMC has begun marketing CytoSorb as a featured technology for cytokine, bilirubin, and myoglobin removal on its critical care platforms worldwide; CytoSorb can be found on FMC's corporate website
- Planning underway for cooperation at multiple major international congresses
- Collaboration on general PR and marketing initiatives
- Kickoff innovation working groups



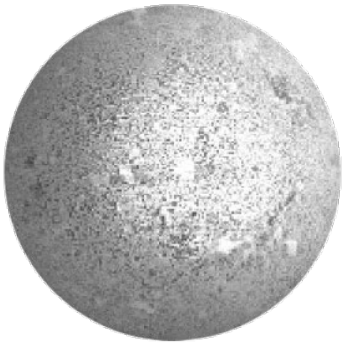
Facility and Manufacturing Update

Vincent Capponi, MS
President and Chief Operating Officer

CytoSorbents™
WORKING TO SAVE LIVES

Quarterly Progress

R&D



New Facility

CytoSorbents™

WORKING TO SAVE LIVES

R&D

- Grant programs continue to receive funding for the development of a wide range of products from removal of potassium, to anti-A and anti-B antibodies for blood transfusions.
- The HemoDefend product family has received significant support from the U.S. Department of Defense with more than $17M in funding. These products will facilitate the generation of:
  - Universal plasma
  - Low titer whole blood and
  - Universal Freeze-dried plasma
    - simple storage
    - long shelf life
    - simplified transport

The R&D team is focused on advancing these programs to support the development and monetization of these assets.

Facility/Manufacturing Update

Facility Update

- ISO13485 certification for the new facility received in September
- Transfer of polymer manufacturing to the new facility on track for December 2022
- Loss of product due to an equipment failure occurred in September translating into a spike in cost of goods sold; insurance claims filed

Cost of Goods

- We expect to see improvement in cost of goods during 2023
- Consolidation of all operations into our new facility, expected recovery in our core business and increase in unit demand is expected to facilitate recovery of our gross margins back to previous levels of +80%.

Facility/Manufacturing Update

Inflation

- Rising oil prices affecting raw material costs and transportations costs have pressured CytoSorb product cost
- We have employed several mitigation strategies to reduce the impact of these raw material and transportation costs:
  - Large quantity purchases with multiple releases to lock in pricing
  - Switch to ocean shipping where possible

Overall, we have been able to manage raw material and transportation price increases and minimize the impact on product costs.

Concluding Remarks

Phillip Chan, MD, PhD

Chief Executive Officer

Summary

- STAR-T is enrolling well and we expect to achieve the 1st milestone of STAR-T this month and are focusing our resources on driving this trial to completion, including adding Canadian centers. We have many reasons to prioritize this trial
- We will temporarily pause STAR-D to focus on STAR-T and save ~$4M in costs in 2023, but are absolutely committed to STAR-D and will resume at appropriate time
- Our markets are facing numerous challenges related to the COVID pandemic and geopolitical uncertainty and macroeconomic factors. Q3 2022 sales reflect this and the traditional seasonal third quarter. Recovery will likely be gradual
  - Lot of energy and enthusiasm among users
  - Working on many initiatives to drive sales and even growth in this challenging environment
- Cash preservation is paramount with goal of adding non-dilutive debt by year-end and actively controlling expenses by reducing or eliminating non-core, non-priority items
- New manufacturing facility is expected to be fully online by year-end, and high confidence in returning product gross margins to historic levels
- Many exciting new areas of expansion, with positive data to help drive future growth
  - ARDS (ECMO+ CytoSorb), Liver (CytoSorb), ATR (DrugSorb/CytoSorb), Organ Transplant (CytoSorb), Ex vivo organ perfusion (ECOS-300CY, Persorb)

Q&A Session

CytoSorbents Corporation

NASDAQ: CTSO

Company Contact
Dr. Phillip Chan
pchan@cytosorbents.com