

CytoSorbents Corporation (NASDAQ/CTSO)

September 1, 2021

BUY: COVID ARDS (ECMO) Trial Shows Efficacy

The primary outcome of 90-day ICU mortality was 26.9% from the initiation of CytoSorb treatment, well below the 50% reported in the North American cohort of the ELSO registry. CytoSorb received FDA Emergency Use Authorization in April 2020 for use in critically ill COVID-19 patients.

Jason H. Kolbert

Senior Healthcare Analyst

646-465-6891

jkolbert@dawsonjames.com

Investment Highlights

Results: 90-day ICU Mortality was 27% with ECMO + CytoSorb in CTC Registry Data Presented on Day 1 of the International Symposium on Intensive Care and Emergency Medicine. For context, the Extracorporeal Life Support Organization COVID-19 ECMO Registry Reports 50% 90-day Mortality in North America with Standard ECMO Alone.

- Overall demographics and comorbidities of the CTC cohort were comparable to the ELSO Registry cohort with the exception of higher rates of obesity in the U.S. CTC cohort, a recognized risk factor for death in COVID-19.
- Primary outcome of 90-day ICU mortality was 26.9% from the initiation of CytoSorb treatment, well below the 50% reported in the North American cohort of the ELSO registry.
- Rates of ICU discharge and recovery exceeded ICU mortality rates throughout the follow-up period. All patients discharged alive from the ICU also survived to hospital discharge.
- CytoSorb treatment led to a decrease in elevated baseline inflammatory biomarkers.
- Survival was associated with earlier initiation of CytoSorb therapy, lower baseline D-dimer levels, and a lower baseline Sequential Organ Failure Assessment (SOFA) score.
- Very high baseline D-dimer levels (breakdown products of blood clots) were associated with a potential increased risk of death by logistic regression analysis. This is consistent with published literature on D-dimers and the associated increased risk of severe disease and death in COVID-19 patients, presumably due to the consequences of high blood clot burden, including respiratory failure caused by pulmonary emboli, and diffuse tissue and vital organ ischemic injury caused by thrombotic microangiopathy.
- CytoSorb demonstrated no unanticipated device-related adverse events.

Valuation. We use a series of therapeutic models across the various indications and geographies and project product revenues for the Company out to the year 2030. In our U.S. therapeutic models, we apply a 30% risk cut (70% success probability) that both U.S. approvals and our market share forecasts can be realized. For us, valuation becomes an interesting question when we discuss the appropriate "r" risk-rate to use in our three-model metrics, free cash flow to the Firm (FCFF), Discounted EPS, and Sum-Of-The-Parts (SOP) models, which are equal-weighted, averaged and rounded to the nearest whole number. Typically for early-stage companies with no revenues, we use 30%, and for companies with established products and revenues, we use a lower 15%. CytoSorbents arguably is somewhere in the middle, as products are approved and selling in Europe but not yet in the U.S. If we select a conservative 30%, we derive a \$9.00 price target. If we select a more aggressive 15%, we arrive at a \$26.00 target. We select a mid-point (22.5%) to derive a \$16.00 target, which reflects the revised share count from the recent capital raise.

Risks to our price target include: market, regulatory, financial, and commercialization risks.



Stock Data			
52-Week Range	\$6.99	-	\$11.68
Shares Outstanding (mil.)	43.4		
Market Capitalization (mil.)	\$410		
Enterprise Value (mil.)	\$391		
Debt to Capital	0%		
Book Value/Share	\$0.35		
Price/Book	4.3		
Average Three Months Trading Volume (K)	130		
Insider Ownership	11.7%		
Institutional Ownership	42.3%		
Short interest (mil.)	4.5%		
Dividend / Yield	\$0.00/0.0%		

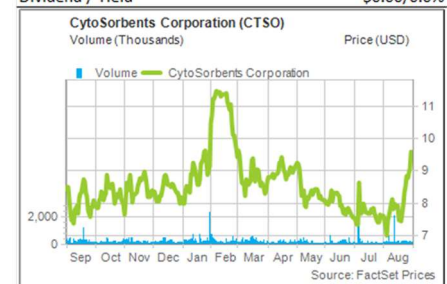


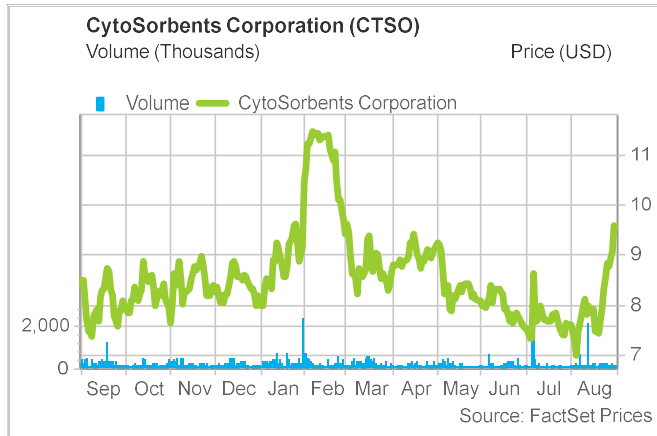
Exhibit 1. Income Statement

CTSO.: Income Statement (\$000)																				
.. YE December 31	2019A	1Q20A	2Q20A	3Q20A	4Q20A	2020A	1Q21A	2Q21A	3Q21A	4Q21E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue:																				
CytoSorb Direct Sales (Germany, Austria, Switzerland)	22,766	5,050	5,500	6,930	8,127	25,607	7,000	7,000	8,214	10,865	40,239	54,439	69,046	84,070	99,520	115,405	131,735	148,520	150,699	150,699
CytoSorb Distributor (Rest of EU)		2,350	2,800	2,497	2,593	10,240	3,098	3,096	3,100	3,601	13,336	21,587	27,297	41,422	55,871	70,651	85,766	86,763	87,771	87,771
CytoSorb (Cardiac surgery EU)		710	1,160	780	770	3,420				1,854	6,866	9,218	11,604	14,022	16,474	16,589	16,705	16,822	16,940	16,940
CytoSorb (Cardiac surgery US)		-	-	-	-	-	-	-	-	-	-	-	16,294	21,899	27,593	66,755	67,290	67,829	68,373	68,373
CytoSorb (sepsis US)												17,846	45,376	92,302	187,755	200,508	223,353	246,919	271,225	271,225
VelResQ		45	60	39	41	185	45	47	51	52	194	204	214	225	236					
Other Sales																				
Total Product Sales	22,766	8,155	9,520	10,246	11,531	39,452	10,143	10,143	11,365	16,372	60,635	103,293	169,831	253,939	387,449	469,908	524,849	566,853	595,008	595,008
Royalty (HemoDefend US)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grant revenue	2,184	551	275	301	425	1,552	455	455	658	-	1,568	-	-	-	-	-	-	-	-	-
Other revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	24,950	8,706	9,795	10,547	11,956	41,004	10,598	10,598	12,023	16,372	62,204	103,293	169,831	253,939	387,449	469,908	524,849	566,853	595,008	595,008
Expenses:																				
Costs of Goods Sold	7,364	2,385	3,250	2,890	2,527	11,052	2,751	2,751	2,710	4,441	12,854	20,659	33,966	50,788	77,490	93,982	104,970	113,371	119,002	119,002
%COGS	25%	29%	20%	28%	26%	28%	27%	27%	27%	27%	27%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Research and Development	12,092	1,965	2,406	1,753	2,685	8,810	2,282	2,282	3,699	2,617	9,691	10,660	11,726	12,898	14,188	15,607	17,168	18,885	20,773	22,850
%R&D	53%	24%	25%	17%	23%	22%	22%	22%	33%	16%	16%	10%	7%	5%	4%	3%	3%	3%	3%	4%
Selling, General and Administrative	22,006	6,317	6,591	7,282	8,273	28,463	7,710	7,709	9,821	8,838	32,733	36,006	36,726	37,461	38,210	38,974	39,753	40,549	41,360	42,187
%SG&A	97%	77%	69%	71%	72%	72%	76%	76%	86%	54%	54%	35%	22%	15%	10%	8%	8%	7%	7%	7%
Legal, financial and other counseling	2,462	519	846	580	1,103	3,048	708	707	717	823	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048
Total Expenses	43,924	11,186	13,093	12,508	14,588	51,373	13,451	13,449	16,947	16,718	58,125	70,372	85,466	104,195	132,936	151,611	164,939	175,852	184,182	187,086
Operating Income (Loss)	(18,974)	(2,480)	(3,298)	(1,960)	(2,632)	(10,369)	(2,853)	(2,852)	(4,924)	(347)	4,079	32,921	84,365	149,745	254,513	318,297	359,910	391,002	410,826	407,921
Interest income (expense), net																				
Gain (loss) on foreign currency transactions	(1,384)	(668)	(274)	(261)	2	(1,201)	(10)	(10)	(13)											
Change in warrant liability		(306)		1,381	1,532	2,607	(1,306)	(1,306)	243											
Other income (expense), net			705																	
Total Other Income	(1,384)	(974)	431	1,120	1,534	1,406	(1,316)	(1,316)	247	-	-	-	-	-	-	-	-	-	-	-
Pretax Income	(20,358)	(3,454)	(2,867)	(840)	(1,803)	(8,964)	(4,168)	(4,168)	(4,677)	(347)	4,079	32,921	84,365	149,745	254,513	318,297	359,910	391,002	410,826	407,921
Income Tax Benefit (Provision)	1,092	-	-	-	1,127	1,127	-	-	-	(35)	408	3,951	12,655	26,954	53,448	76,391	100,775	129,031	135,573	134,614
Tax Rate	5%	8%	8%	8%	8%	8%	10%	10%	10%	10%	10%	12%	15%	18%	21%	24%	28%	33%	33%	33%
GAAP Net Income (Loss)	(19,266)	(3,454)	(2,867)	(840)	(2,930)	(7,837)	(4,168)	(4,168)	(4,677)	(312)	3,671	28,970	71,710	122,791	201,066	241,906	259,135	261,971	275,253	273,307
GAAP-EPS	(0.62)	(0.10)	(0.08)	(0.02)	0.00	(0.20)	(0.10)	(0.10)	(0.11)	(0.01)	(0.31)	0.67	1.64	2.80	4.57	5.48	5.84	5.88	6.16	6.09
GAAP-EPS (Dil)	(0.60)	(0.10)	(0.08)	(0.02)	(0.00)	(0.20)	(0.10)	(0.10)	(0.11)	(0.01)	0.08	0.67	1.64	2.80	4.57	5.48	5.84	5.88	6.16	6.09
Wgt'd Avg Shrs (Bas) - '000s	32,253	33,981	36,483	41,593	41,635	38,819	43,243	43,242	43,317	43,360	43,291	43,469	43,643	43,818	43,993	44,170	44,347	44,524	44,703	44,882
Wgt'd Avg Shrs (Dil) - '000s	32,253	33,981	36,483	41,593	41,635	38,819	43,243	43,242	43,317	43,360	43,291	43,469	43,643	43,818	43,993	44,170	44,347	44,524	44,703	44,882

Source: Dawson James estimates and company reports

Important Disclosures:

Price Chart:



Price target and rating changes over the past three years:

Initiated – Buy – July 11, 2019 – Price Target \$15.00
 Update – Buy – August 12, 2019 – Price Target \$15.00
 Update – Buy – August 15, 2019 – Price Target \$15.00
 Update – Buy – August 19, 2019 – Price Target \$15.00
 Update – Buy – November 6, 2019 – Price Target \$15.00
 Update – Buy – February 19, 2020 – Price Target \$15.00
 Price Target Increase – Buy – March 9, 2020 – Price Target \$17.00
 Update – Buy – March 25, 2020 – Price Target \$17.00
 Update – Buy – April 13, 2020 – Price Target \$17.00
 Update – Buy – May 6, 2020 – Price Target \$17.00
 Update – Buy – June 9, 2020 – Price Target \$17.00
 Update – Buy – July 31, 2020 – Price Target \$15.00
 Update – Buy – August 12, 2020 – Price Target \$16.00
 Update – Buy – September 16, 2020 – Price Target \$16.00
 Update – Buy – October 14, 2020 – Price Target \$16.00
 Update – Buy – November 5, 2020 – Price Target \$16.00
 Update – Buy – December 2, 2020 – Price Target \$16.00
 Update – Buy – January 12, 2021 – Price Target \$16.00
 Update – Buy – January 19, 2021 – Price Target \$16.00
 Update – Buy – April 20, 2021 – Price Target \$16.00
 Update – Buy – May 6, 2021 – Price Target \$16.00
 Update – Buy – July 6, 2021 – Price Target \$16.00
 Update – Buy – September 1, 2021 – Price Target \$16.00

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- 1) **Buy:** The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
- 2) **Neutral:** The analyst believes the price of the stock is fairly valued for the next 12-18 months;
- 3) **Sell:** The analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Current as of: 27-Aug-21

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	25	71%	4	16%
Market Perform (Neutral)	10	29%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Total	35	100%	4	11%

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