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CytoSorbents Corporation (NASDAQ/CTSO)

September 18, 2023

BUY: Data on Ex Vivo Organ Perfusion in Recent Publication

CytoSorb and ECOS-300CY in Lung Transplantation: The final analysis of the U.S. CytoSorb Therapy in COVID-19 (CTC) Registry was published recently in the journal Critical Care and demonstrated that the combination of CytoSorb and extracorporeal membrane oxygenation (ECMO) therapy resulted in 74% 90-day survival in 100 critically ill patients from 5 major U.S. ECMO centers who had COVID-19 with severe acute respiratory distress syndrome (ARDS) and who failed mechanical ventilation.

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Investment Highlights

How did the Results Compare? Favorable. The 52% 90-day survival rate reported by the Extracorporeal Life Support Organization (ELSO) in over 15,000 comparably ill COVID-19 patients using ECMO alone. The paper highlighted the concept of "enhanced lung rest," where CytoSorb is used to remove circulating inflammatory cytokines and toxins that can cause or worsen lung injury via capillary leak syndrome, pulmonary edema (i.e. fluid in the lungs), and severe inflammation.

START-T: This is an n=120 randomized, controlled trial across 30 centers being conducted in both the U.S. and Canada that is designed to evaluate the ability of DrugSorb-ATR to reduce perioperative bleeding by removing the antithrombotic agent, ticagrelor, in patients undergoing cardiothoracic surgery. The pivotal STAR-T trial completed enrollment ahead of internal projections. Brilinta is one of the leading "blood thinners" used as part of dual-antiplatelet therapy in patients suspected of having a heart attack. But if the patient is one of the up to 10% that need to undergo coronary artery bypass graft (CABG) or other open-heart surgery, the risk of major fatal or life-threatening CABG-related bleeding can be as high as 50-65%, particularly if the surgery is performed within several days of the last Brilinta dose. Waiting in the hospital to wash out the drug is the only acceptable alternative, but this comes at a high cost and potential clinical risk. The goal of DrugSorb-ATR is to allow patients to get the critical surgery they need without delay while reducing or preventing this bleeding risk by actively removing the drug during the surgery. DrugSorb-ATR has received FDA Breakthrough Device Designation for this indication.

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. We select a 25% risk rate to balance risk versus reward to derive a \$16.00 target.

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

Current Price \$1.98
Price Target \$16.00



Source: CytoSorbents

Stock Data

52-Week Range	\$1.03	-	\$4.59
Shares Outstanding (mil.)	44.4		
Market Capitalization (mil.)	\$88		
Enterprise Value (mil.)	\$68		
Debt to Capital	0%		
Book Value/Share	\$0.35		
Price/Book	1.9		
Average Three Months Trading Volume (K)	72		
Insider Ownership	13.4%		
Institutional Ownership	36.1%		
Short interest (mil.)	2.3%		
Dividend / Yield	\$0.00/0.0%		

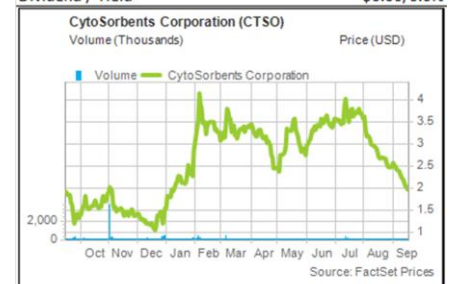


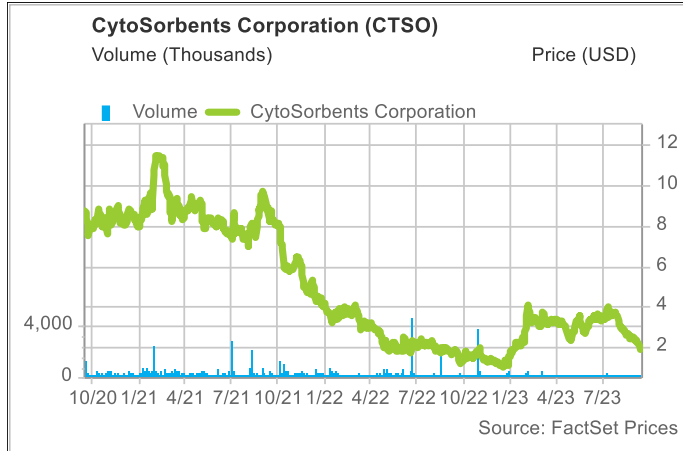
Exhibit 1. Income Statement

CTSO.: Income Statement (\$000)																
YE December 31	2019A	2020A	2021A	2022A	1Q23A	2Q23A	3Q23E	4Q23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue:																
CytoSorb Direct Sales (Germany, Austria, Switzerland)	22,766	25,607	29,354	17,573	5,910	5,920	7,540	7,830	29,000	38,000	49,732	58,030	67,713	79,013	92,198	92,198
CytoSorb Distributor (Rest of EU)		10,240	10,498	11,000	1,000	1,050	1,560	1,620	6,000	18,500	18,472	21,490	25,001	29,085	33,837	33,837
CytoSorb (Cardiac surgery EU)		3,420			1,000	1,102	1,300	1,350	5,000	14,022	16,474	16,589	16,705	16,822	16,940	16,940
CytoSorb (Cardiac surgery US)		-	-	-	-	-	-	-	-	21,899	27,593	66,755	67,290	67,829	68,373	68,373
CytoSorb (other US)		-	-	-	-	-	-	-	-	38,459	78,231	190,960	283,238	395,071	602,722	602,722
VetResQ		185	194							-	-	-	-	-	-	-
Other Sales				787		7										
Total Product Sales	22,766	39,452	40,047	29,360	7,910	8,072	10,400	10,800	40,000	130,880	190,502	353,824	459,947	587,820	814,070	814,070
Royalty (HemoDefend US)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grant revenue	2,184	1,552	3,062	5,328	1,539	1,348			2,887							
Other revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	24,950	41,004	43,109	34,689	9,449	9,421	10,400	10,800	42,887	130,880	190,502	353,824	459,947	587,820	814,070	814,070
Expenses:																
Costs of Goods Sold	7,364	11,052	11,047	13,956	3,994	3,402	3,756	3,900	15,052	26,176	38,100	70,765	91,989	117,564	162,814	162,814
	%COGS	25%	28%	32%	48%	20%	36%	36%	36%	20%	20%	20%	20%	20%	20%	20%
Research and Development	12,092	8,810	16,380	15,119	4,214	3,668	4,324	4,490	16,631	18,294	20,123	22,136	24,349	26,784	29,462	32,409
	%R&D	53%	22%	41%	51%	53%	45%	42%	42%	14%	11%	6%	5%	5%	4%	4%
Selling, General and Administrative	22,006	28,463	35,749	34,288	8,463	7,723	9,093	9,443	34,974	35,673	36,387	37,115	37,857	38,614	39,386	40,174
	%SG&A	97%	72%	89%	117%	107%	96%	87%	87%	27%	19%	10%	8%	7%	5%	5%
Legal, financial and other counseling	2,462	3,048	2,731	2,848	669	1,185	740	769	2,848	2,848	2,848	2,848	2,848	2,848	2,848	2,848
Total Expenses	43,924	51,373	65,907	66,211	17,340	15,978	17,913	18,602	69,504	82,991	97,458	132,863	157,043	185,810	234,511	238,245
Operating Income (Loss)	(18,974)	(10,369)	(22,799)	(31,522)	(7,891)	(6,559)	(7,513)	(7,802)	(26,617)	47,889	93,044	220,961	302,904	402,010	579,559	575,825
Interest income (expense), net																
Gain (loss) on foreign currency transactions	(1,384)	(1,201)	2	133												
Change in warrant liability		2,607	(2,569)	(2,449)												
Other income (expense), net				(67)												
Total Other Income	(1,384)	1,406	(2,567)	(2,383)	566	406	-	-	-	-	-	-	-	-	-	-
Pretax Income	(20,358)	(8,964)	(25,366)	(33,905)	(7,326)	(6,153)	(7,513)	(7,802)	(26,617)	47,889	93,044	220,961	302,904	402,010	579,559	575,825
Fx				1,804												
Income Tax Benefit (Provision)	1,092	1,127	(2,537)	1,095	-	-	(1,127)	(1,170)		8,620	19,539	53,031	84,813	132,663	191,255	190,022
Tax Rate	5%	8%	10%	12%	15%	15%	15%	15%	15%	18%	21%	24%	28%	33%	33%	33%
GAAP Net Income (Loss)	(19,266)	(7,837)	(22,829)	(31,009)	(7,326)	(6,153)	(6,386)	(6,632)	(26,617)	39,269	73,505	167,931	218,091	269,347	388,305	385,803
GAAP-EPS	(0.62)	(0.20)	(0.57)	(0.71)	(0.17)	(0.14)	(0.14)	(0.15)	(0.61)	0.89	1.66	3.77	4.87	6.00	8.61	8.52
GAAP-EPS (Dil)	(0.60)	(0.20)	(0.53)	(0.71)	(0.17)	(0.14)	(0.14)	(0.15)	(0.61)	0.89	1.66	3.77	4.87	6.00	8.61	8.52
Wgtd Avg Shrs (Bas) - '000s	32,253	38,819	43,358	43,636	43,676	44,015	44,059	44,103	43,963	44,213	44,391	44,568	44,747	44,926	45,106	45,287
Wgtd Avg Shrs (Dil) - '000s	32,253	38,819	43,358	43,636	43,676	44,015	44,059	44,103	43,963	44,213	44,391	44,568	44,747	44,926	45,106	45,287

Source: Dawson James

Important Disclosures:

Price Chart:



Price target and rating changes over the past three-plus years:

- 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
- Update – Buy – October 15, 2021 – Price Target \$16.00
- Update – Buy – November 9, 2021 – Price Target \$16.00
- Update – Buy – November 22, 2021 – Price Target \$16.00
- Update – Buy – January 18, 2022 – Price Target \$16.00
- Update – Buy – March 9, 2022 – Price Target \$16.00
- Update – Buy – April 29, 2022 – Price Target \$16.00
- Update – Buy – May 4, 2022 – Price Target \$16.00
- Update – Buy – August 3, 2022 – Price Target \$16.00
- Update – Buy – August 17, 2022 – Price Target \$16.00
- Update – Buy – October 6, 2022 – Price Target \$16.00
- Update – Buy – November 4, 2022 – Price Target \$16.00
- Update – Buy – November 15, 2022 – Price Target \$16.00
- Update – Buy – December 29, 2022 – Price Target \$16.00
- Update – Buy – January 24, 2023 – Price Target \$16.00
- Update – Buy – February 1, 2023 – Price Target \$16.00
- Update – Buy – March 10, 2023 – Price Target \$16.00
- Update – Buy – April 20, 2023 – Price Target \$16.00
- Update – Buy – May 3, 2023 – Price Target \$16.00
- Update – Buy – June 16, 2023 – Price Target \$16.00
- Update – Buy – July 7, 2023 – Price Target \$16.00
- Update – Buy – August 2, 2023 – Price Target \$16.00
- Update – Buy – September 16, 2023 – Price Target \$16.00

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- 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 22-Aug-23

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	23	65.70%	3	8.60%
Market Perform (Neutral)	12	34.30%	3	8.60%
Market Underperform (Sell)	0	0%	0	0.00%
Total	35	100%	6	17.20%

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