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## CytoSorbents Corporation (NASDAQ/CTSO)

November 5, 2020

### BUY: Reports a Strong Quarter, Partly Driven by COVID, \$88 Million in Cash

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CytoSorbents reported \$10.5M in revenues versus \$9.6M in expenses as the company closes in on becoming cash-flow positive. We believe it's still "early days" for CytoSorb with multiple clinical programs that, over time, should expand the market opportunity. These include a U.S. Septic shock trial (PROCYSS), and acute liver disease (HepOnFire), Cardiac Surgery (REFRESH 2-AKI), and Anti-thrombotic removal trials.

Current Price \$8.39  
 Price Target \$16.00

Estimates	F2019A	F2020E	F2021E
<b>Expenses (\$000s)</b>	\$ 43,924	\$ 49,531	\$ 56,863
1Q March	\$ 9,475	\$ 11,186	\$ 13,078
2Q June	\$ 9,862	\$ 13,093	\$ 13,647
3Q September	\$ 11,723	\$ 12,506	\$ 14,784
4Q December	\$ 12,864	\$ 12,746	\$ 15,353

	F2019A	F2020E	F2021E
<b>EPS (diluted)</b>	\$ (0.62)	\$ (0.25)	\$ 0.27
1Q March	\$ (0.15)	\$ (0.10)	\$ 0.06
2Q June	\$ (0.11)	\$ (0.08)	\$ 0.06
3Q September	\$ (0.21)	\$ (0.02)	\$ 0.07
4Q December	\$ (0.14)	\$ (0.05)	\$ 0.07

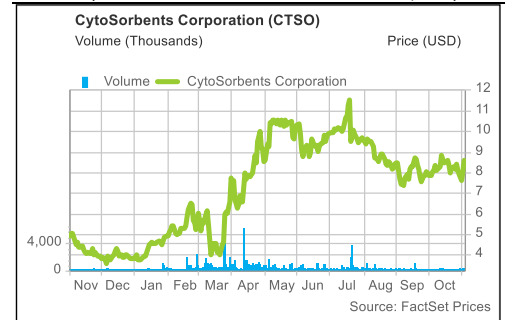
EBITDA/Share	(\$0.63)	(\$0.26)	\$0.30
EV/EBITDA (x)	0.0	0.0	0.0

Stock Data			
52-Week Range	\$3.49	-	\$11.74
Shares Outstanding (mil.)	43.2		
Market Capitalization (mil.)	\$362		
Enterprise Value (mil.)	\$342		
Debt to Capital	0%		
Book Value/Share	\$0.35		
Price/Book	36.7		
Average Three Months Trading Volume (K)	474		
Insider Ownership	11.3%		
Institutional Ownership	27.1%		
Short interest (mil.)	6.6%		
Dividend / Yield	\$0.00/0.0%		

#### Clinical Updates:

- **REFRESH 2-AKI Trial:** The study is likely to resume early next year, pending a resolution of COVID-19 restrictions.
- **REMOVE Endocarditis Trial:** Management reviewed recent discussions with the study investigators of this completed n=250 trial. Recall that the study was a government-funded (German) investigator-led randomized controlled study in patients undergoing valve replacement surgery for infective endocarditis. The full analysis of the study is expected in 1H-2021 with a publication planned for mid-2021. If positive, the study should support expansion.
- **COVID Update:** The FDA granted Emergency Use Authorization (EUA) to CytoSorb for use in adult, critically-ill COVID-19 patients with imminent or confirmed respiratory failure, enabling commercial sales to all hospitals in the U.S. for this application. Its estimated 2,800 patients have already been treated.

**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. If we select a mid-point (22.5%), we derive a \$16.00 target, which reflects the revised share count from the recent capital raise.



**Risks.** Market risks, Regulatory risks, Financial risks, and Commercialization risks.

## Modeling Assumptions

1. We assume continued steady growth for CytoSorb in the current key EU direct sales countries of Germany, Austria, and Switzerland.
2. We assume a selling price per cartridge of \$1,000 for direct sales and \$600 for distribution sales. We estimate that each patient will require an average of five units (CytoSorb cartridges) for sepsis treatment and three units for cardiac treatment.
3. We conservatively assume that CytoSorb can achieve a ten percent market share of the market in Germany, Austria, and Switzerland, and 3% of the market in the rest of the EU by 2030.
4. Our model includes CytoSorb revenues in the U.S. for cardiac surgery and sepsis beginning in 2022 upon commercialization. To these revenues, we apply a 70% probability of success (or 30% risk cut).

## Exhibit 1. CytoSorb sepsis EU direct sales (Germany, Austria, and Switzerland)

CytoSorb - Direct Sales (Germany, Austria, Switzerland)	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EU population	506,327,109	507,441,029	508,557,399	509,676,225	510,797,513	511,921,267	513,047,494	514,176,199	515,307,386	516,441,062	517,577,233	518,715,903	519,857,078
Germany population	81,202,563	81,632,936	82,065,591	82,500,539	82,937,791	83,377,362	83,819,262	84,263,504	84,710,100	85,159,064	85,610,407	86,064,142	86,520,282
Austria population	8,446,189	8,448,723	8,451,257	8,453,793	8,456,329	8,458,866	8,461,404	8,463,942	8,466,481	8,469,021	8,471,562	8,474,103	8,476,646
Switzerland population	8,098,152	8,115,158	8,132,200	8,149,277	8,166,391	8,183,540	8,200,726	8,217,947	8,235,205	8,252,499	8,269,829	8,287,196	8,304,599
Critical care population (Sepsis included)	498,500	500,804	503,110	505,428	507,759	510,101	512,454	514,822	517,200	519,591	521,994	524,410	526,838
Percent of patients with access to hospitals with CytoSorb	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total patients	249,254.60	250,401.88	251,555.07	252,714.20	253,879.30	255,050.41	256,227.55	257,410.75	258,600.06	259,795.49	260,997.08	262,204.88	263,418.89
Market penetration	1.2%	1.7%	1.8%	2.0%	2.0%	3.0%	4.0%	5.0%	6.0%	6.5%	7.0%	7.5%	8.0%
Total addressable patients	2,991	4,257	4,528	5,054	7,616	10,202	12,811	14,158	15,516	16,887	18,270	19,665	21,074
Estimated units per patient	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total filter needed	14,955	21,284	22,640	25,271	38,082	51,010	64,057	70,788	77,580	84,434	91,349	98,327	105,368
Cost of therapy	\$ 1,030	\$ 1,041	\$ 1,051	\$ 1,062	\$ 1,072	\$ 1,083	\$ 1,094	\$ 1,105	\$ 1,116	\$ 1,127	\$ 1,138	\$ 1,149	\$ 1,161
Change in price	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Revenue ('000)	\$ 15,408	\$ 22,148	\$ 23,795	\$ 26,826	\$ 40,829	\$ 55,237	\$ 70,058	\$ 78,194	\$ 86,554	\$ 95,142	\$ 103,964	\$ 113,024	\$ 122,328
Risk factor													
Total revenue ('000)	\$ 15,408	\$ 22,148	\$ 23,795	\$ 26,826	\$ 40,829	\$ 55,237	\$ 70,058	\$ 78,194	\$ 86,554	\$ 95,142	\$ 103,964	\$ 113,024	\$ 122,328

Source: Dawson James estimates, company reports

## Exhibit 2. CytoSorb sepsis EU sales by distributorship (excluding Germany, Austria, and Switzerland)

CytoSorb - Direct Sales (Germany, Austria, Switzerland)	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EU population	506,327,109	507,441,029	508,557,399	509,676,225	510,797,513	511,921,267	513,047,494	514,176,199	515,307,386	516,441,062	517,577,233	518,715,903	519,857,078
Germany population	81,202,563	81,632,936	82,065,591	82,500,539	82,937,791	83,377,362	83,819,262	84,263,504	84,710,100	85,159,064	85,610,407	86,064,142	86,520,282
Austria population	8,446,189	8,448,723	8,451,257	8,453,793	8,456,329	8,458,866	8,461,404	8,463,942	8,466,481	8,469,021	8,471,562	8,474,103	8,476,646
Switzerland population	8,098,152	8,115,158	8,132,200	8,149,277	8,166,391	8,183,540	8,200,726	8,217,947	8,235,205	8,252,499	8,269,829	8,287,196	8,304,599
Critical care population (Sepsis included)	498,500	500,804	503,110	505,428	507,759	510,101	512,454	514,822	517,200	519,591	521,994	524,410	526,838
Percent of patients with access to hospitals with CytoSorb	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total patients	249,254.60	250,401.88	251,555.07	252,714.20	253,879.30	255,050.41	256,227.55	257,410.75	258,600.06	259,795.49	260,997.08	262,204.88	263,418.89
Market penetration	1.2%	1.7%	1.8%	2.0%	2.0%	3.0%	4.0%	5.0%	6.0%	6.5%	7.0%	7.5%	8.0%
Total addressable patients	2,991	4,257	4,528	5,054	7,616	10,202	12,811	14,158	15,516	16,887	18,270	19,665	21,074
Estimated units per patient	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total filter needed	14,955	21,284	22,640	25,271	38,082	51,010	64,057	70,788	77,580	84,434	91,349	98,327	105,368
Cost of therapy	\$ 1,030	\$ 1,041	\$ 1,051	\$ 1,062	\$ 1,072	\$ 1,083	\$ 1,094	\$ 1,105	\$ 1,116	\$ 1,127	\$ 1,138	\$ 1,149	\$ 1,161
Change in price	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Revenue ('000)	\$ 15,408	\$ 22,148	\$ 23,795	\$ 26,826	\$ 40,829	\$ 55,237	\$ 70,058	\$ 78,194	\$ 86,554	\$ 95,142	\$ 103,964	\$ 113,024	\$ 122,328
Risk factor													
Total revenue ('000)	\$ 15,408	\$ 22,148	\$ 23,795	\$ 26,826	\$ 40,829	\$ 55,237	\$ 70,058	\$ 78,194	\$ 86,554	\$ 95,142	\$ 103,964	\$ 113,024	\$ 122,328

Source: Dawson James estimates, company reports

## Exhibit 3. CytoSorb U.S. sales for cardiac surgery

CytoSorb Cardiac Surgery US	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
US population	327,296,502	329,587,577	331,894,690	334,217,953	336,557,479	338,913,381	341,285,775	343,674,775	346,080,499	348,503,062	350,942,583	353,399,182	355,872,976
Cardiac surgery	1,009,027	1,012,054	1,015,090	1,018,136	1,021,190	1,024,254	1,027,326	1,030,408	1,033,499	1,036,600	1,039,710	1,042,829	1,045,957
Market penetration	-	-	-	0.0%	0.0%	0.3%	0.4%	0.5%	1.2%	1.2%	1.2%	1.2%	1.2%
Total addressable patients	-	-	-	3	3	3,073	4,109	5,152	12,402	12,439	12,477	12,514	12,551
Estimated units per patient	-	-	-	3	3	3	3	3	3	3	3	3	3
Total filter needed	-	-	-	9,218	12,328	9,218	12,328	15,456	37,206	37,318	37,430	37,542	37,654
Cost of therapy	\$ 2,500	\$ 2,513	\$ 2,525	\$ 2,538	\$ 2,550	\$ 2,563	\$ 2,576	\$ 2,589	\$ 2,602	\$ 2,615	\$ 2,628	\$ 2,641	\$ 2,654
Change in price	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Revenue ('000)	\$ -	\$ -	\$ -	\$ 23,277	\$ 31,284	\$ 39,419	\$ 95,364	\$ 96,128	\$ 96,891	\$ 97,655	\$ 98,419	\$ 99,183	\$ 99,947
Risk factor				30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Total revenue ('000)	\$ -	\$ -	\$ -	\$ 16,294	\$ 21,899	\$ 27,593	\$ 66,758	\$ 67,290	\$ 67,822	\$ 68,354	\$ 68,886	\$ 69,418	\$ 69,950

Source: Dawson James estimates, company reports

## Exhibit 4. CytoSorb EU sales for cardiac surgery

CytoSorb Cardiac Surgery EU	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Cardiac surgery	1,509,018	1,512,036	1,515,060	1,518,090	1,521,126	1,524,169	1,527,217	1,530,271	1,533,322	1,536,399	1,539,471	1,542,550	1,545,635
Market penetration	0.09%	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Total addressable patients	1,358	1,512	2,273	4,554	6,085	7,621	9,163	10,712	10,733	10,755	10,776	10,798	10,819
Estimated units per patient	3	3	3	3	3	3	3	3	3	3	3	3	3
Total filter needed	4,074	4,536	6,818	13,663	22,863	27,490	32,326	32,326	32,326	32,326	32,326	32,326	32,326
Cost of therapy	\$ 500	\$ 500	\$ 500	\$ 503	\$ 505	\$ 508	\$ 510	\$ 513	\$ 515	\$ 518	\$ 520	\$ 523	\$ 526
Change in price	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Revenue ('000)	\$ 2,037	\$ 2,268	\$ 3,409	\$ 6,866	\$ 9,218	\$ 11,604	\$ 14,022	\$ 16,474	\$ 16,589	\$ 16,705	\$ 16,822	\$ 16,940	\$ 17,059
Risk factor													
Total revenue ('000)	\$ 2,037	\$ 2,268	\$ 3,409	\$ 6,866	\$ 9,218	\$ 11,604	\$ 14,022	\$ 16,474	\$ 16,589	\$ 16,705	\$ 16,822	\$ 16,940	\$ 17,059

Source: Dawson James estimates, company reports

## Exhibit 5. CytoSorb U.S. sales for sepsis

CytoSorb Sepsis US	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
US population	327,296,502	329,587,577	331,894,690	334,217,953	336,557,479	338,913,381	341,285,775	343,674,775	346,080,499	348,503,062	350,942,583	353,399,182	355,872,976
Severe sepsis patients	981,890	988,763	995,684	1,002,654	1,009,672	1,016,740	1,023,857	1,031,024	1,038,241	1,045,509	1,052,828	1,060,198	1,067,619
Market penetration	0.1%	0.2%	0.3%	0.3%	0.3%	0.5%	0.7%	0.9%	1.1%	1.3%	1.5%	1.7%	1.9%
Total addressable patients	1,003	2,019	5,084	10,239	20,620	41,240	82,480	164,960	329,920	659,840	1,319,680	2,639,360	5,278,720
Estimated units per patient	5	5	5	5	5	5	5	5	5	5	5	5	5
Total filter needed	5,013	10,097	25,419	51,193	103,102	206,204	412,408	824,816	1,649,632	3,299,264	6,598,528	13,197,056	26,394,112
Cost of therapy	\$ 2,500	\$ 2,525	\$ 2,550	\$ 2,575	\$ 2,600	\$ 2,625	\$ 2,650	\$ 2,675	\$ 2,700	\$ 2,725	\$ 2,750	\$ 2,775	\$ 2,800
Change in price	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Revenue ('000)	\$ 12,533	\$ 25,484	\$ 64,824	\$ 131,860	\$ 263,720	\$ 527,440	\$ 1,054,880	\$ 2,109,760	\$ 4,219,520	\$ 8,439,040	\$ 16,878,080	\$ 33,756,160	\$ 67,512,320
Risk factor													
Total revenue ('000)	\$ 8,773	\$ 17,846	\$ 45,376	\$ 92,302	\$ 184,604	\$ 369,208	\$ 738,416	\$ 1,476,832	\$ 2,953,664	\$			

**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. If we select a mid-point (22.5%), we derive a \$16.00 target. Given the Company's unique position with approval in Europe, established proof of concept, and a product that works, we select the mid-point of 22.5% and set our target for CytoSorbents at \$16.00.

### Exhibit 6. FCFF Model

Average \$		16
Price Target \$		18
Year		2021

#### DCF Valuation Using FCF (mln):

units ('000)	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EBIT	(17,830)	(20,358)	(10,040)	12,546	35,610	87,164	152,663	257,560	321,483	363,247	394,501	414,503	411,791
Tax Rate	0%	5%	8%	10%	12%	15%	18%	21%	24%	28%	33%	33%	33%
EBIT (1-t)	(17,830)	(19,340)	(9,237)	11,291	31,337	74,089	125,183	203,472	244,327	261,538	264,316	277,717	275,900
CapEx	(493)	(698)	(768)	(845)	(929)	(1,022)	(1,124)	(1,237)	(1,361)	(1,497)	(1,646)	(1,811)	(1,992)
Depreciation	391	582	495	-	-	-	-	-	-	-	-	-	-
Change in NWC	-	-	-	-	-	-	-	-	-	-	-	-	-
FCF	(17,932)	(19,457)	(9,510)	10,447	30,408	73,067	124,059	202,236	242,966	260,041	262,670	275,906	273,908
PV of FCF	(32,964)	(29,197)	(11,649)	10,447	24,823	48,691	67,487	89,808	88,078	76,953	63,454	54,409	44,094
Discount Rate	22.5%												
Long Term Growth Rate	1%												
Terminal Cash Flow	1,286,732												
Terminal Value YE2030	207,140												
NPV	763,733												
NPV-Debt													
Shares out ('000)	43,268												
NPV Per Share	18												
	2030E												

Source: Dawson James estimates, company reports

### Exhibit 7. Discounted EPS Model

Current Year	2021
Year of EPS	2030
Earnings Multiple	15
Discount Factor	22.5%
Selected Year EPS	6.38
NPV	15.40

Source: Dawson James estimates

Discount Rate and Earnings Multiple Varies, Year is Constant							
Earnings Multiple	15.40	5%	10%	15%	20%	25%	30%
	0	0.00	0.00	0.00	0.00	0.00	0.00
5	20.55	13.52	9.06	6.18	4.28	3.01	
10	41.10	27.04	18.13	12.36	8.56	6.01	
15	61.66	40.56	27.19	18.54	12.84	9.02	
20	82.21	54.09	36.25	24.72	17.12	12.03	
25	102.76	67.61	45.32	30.90	21.40	15.03	
30	123.31	81.13	54.38	37.07	25.68	18.04	
35	143.86	94.65	63.44	43.25	29.95	21.05	

Source: Dawson James estimates

### Exhibit 8. Sum of the Parts Model

CytoSorbents	LT Gr	Discount Rate	Yrs to Mkt	% Success	Peak Sales (MMs)	Term Val
<b>CytoSorb - Sepsis Direct Sales(EU)</b>	1%	22.5%	0	70%	\$151	\$701
NPV						\$6
<b>CytoSorb - Sepsis Distributor (EU)</b>	1%	22.5%	0	70%	\$88	\$408
NPV						\$4
<b>CytoSorb (Cardiac surgery US)</b>	1%	22.5%	2	50%	\$68	\$318
NPV						\$1.35
<b>CytoSorb (Cardiac surgery EU)</b>	1%	22.5%	0	70%	\$17	\$79
NPV						\$0.7
<b>CytoSorb (Sepsis US)</b>	1%	22.5%	4	50%	\$271	\$1,262
NPV						\$3.6
Net Margin						55%
MM Shrs OS (2030E)						43
<b>Total</b>						<b>\$15</b>

Source: Dawson James estimates

## **Risk Analysis**

**Market Share Risk:** CytoSorbents's potential inability to further grow product sales in the EU will hinder its profitability as more capital is invested in clinical trials to bring CytoSorb to the U.S. market. The Company's product represents a new treatment for critical care patients that may take longer for adoption than predicted.

**Regulatory Risk:** There may be certain regulatory risks related to CytoSorb approval in the U.S.

**Commercial Risk:** There is no guarantee that the Company will be able to develop and expand sales operations to offset research and development costs. Delays in U.S. commercialization will be negatively reflected in its valuation.

**Financial Risk:** The Company should be expected to raise capital in the near term. We assume a raise and dilution, but there is no guarantee that market conditions will be favorable.

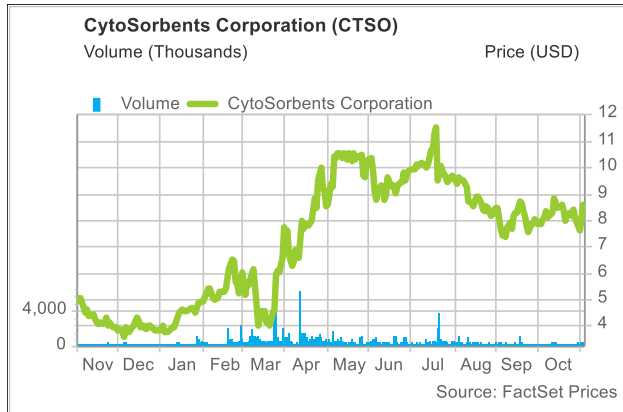
**Exhibit 9. Income Statement**

CTSO: Income Statement (\$000)																				
YE December 31	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20A	2Q20A	3Q20A	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
<b>Revenue:</b>																				
CytoSorb Direct Sales (Germany, Austria, Switzerland)	4,576	5,850	5,728	6,612	22,766	5,050	5,500	6,930	7,000	24,480	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	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	810	3,460	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)	-	-	-	-	-	-	-	-	-	-	8,773	17,846	45,376	92,302	187,755	200,508	223,353	246,919	271,225	271,225
VetResQ	-	-	-	-	-	45	60	39	41	185	194	204	214	225	236	-	-	-	-	-
Other Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Product Sales</b>	<b>4,576</b>	<b>5,850</b>	<b>5,728</b>	<b>6,612</b>	<b>22,766</b>	<b>8,155</b>	<b>9,520</b>	<b>10,246</b>	<b>10,444</b>	<b>38,365</b>	<b>69,409</b>	<b>103,293</b>	<b>169,831</b>	<b>253,939</b>	<b>387,449</b>	<b>469,908</b>	<b>524,849</b>	<b>566,853</b>	<b>595,008</b>	<b>595,008</b>
Royalty (HemoDefend US)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grant revenue	615	382	367	820	2,184	551	275	301	-	1,127	-	-	-	-	-	-	-	-	-	-
Other revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Revenue</b>	<b>5,191</b>	<b>6,232</b>	<b>6,095</b>	<b>7,432</b>	<b>24,950</b>	<b>8,706</b>	<b>9,795</b>	<b>10,547</b>	<b>10,444</b>	<b>39,492</b>	<b>69,409</b>	<b>103,293</b>	<b>169,831</b>	<b>253,939</b>	<b>387,449</b>	<b>469,908</b>	<b>524,849</b>	<b>566,853</b>	<b>595,008</b>	<b>595,008</b>
<b>Expenses:</b>																				
Costs of Goods Sold	1,738	1,834	1,696	2,096	7,364	2,385	3,250	2,890	2,946	11,471	13,882	20,659	33,966	50,788	77,490	93,982	104,970	113,371	119,002	119,002
	38%	29%	25%	25%	25%	29%	20%	28%	28%	28%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Research and Development	2,418	2,930	3,185	3,559	12,092	1,965	2,406	1,753	2,000	8,125	8,937	9,831	10,814	11,895	13,085	14,394	15,833	17,416	19,158	21,074
	53%	50%	56%	54%	53%	24%	25%	17%	19%	21%	13%	10%	9%	5%	3%	3%	3%	3%	3%	4%
Selling, General and Administrative	4,758	4,506	6,108	6,634	22,006	6,317	6,591	7,282	7,200	27,390	31,499	34,649	35,342	36,048	36,769	37,505	38,255	39,020	39,800	40,596
	104%	77%	107%	100%	97%	77%	69%	71%	69%	71%	45%	34%	21%	14%	9%	8%	7%	7%	7%	7%
Legal, financial and other counseling	561	592	733	576	2,462	519	846	580	600	2,545	2,545	2,545	2,545	2,545	2,545	2,545	2,545	2,545	2,545	2,545
<b>Total Expenses</b>	<b>9,475</b>	<b>9,862</b>	<b>11,723</b>	<b>12,864</b>	<b>43,924</b>	<b>11,186</b>	<b>13,093</b>	<b>12,506</b>	<b>12,746</b>	<b>49,531</b>	<b>56,863</b>	<b>67,683</b>	<b>82,667</b>	<b>101,277</b>	<b>129,889</b>	<b>148,425</b>	<b>161,603</b>	<b>172,352</b>	<b>180,505</b>	<b>183,216</b>
Operating Income (Loss)	(4,284)	(3,630)	(5,628)	(5,432)	(18,974)	(2,480)	(3,298)	(1,960)	(2,302)	(10,040)	12,546	35,610	87,164	152,663	257,560	321,483	363,247	394,501	414,503	411,791
Interest income (expense), net	(205)	(214)	(302)	-	-	(306)	705	1,381	-	-	-	-	-	-	-	-	-	-	-	-
Gain (loss) on foreign currency transactions	(393)	297	(956)	(332)	(1,384)	(668)	(274)	(261)	-	-	-	-	-	-	-	-	-	-	-	-
Change in warrant liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other income (expense), net	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Other Income</b>	<b>(598)</b>	<b>83</b>	<b>(1,258)</b>	<b>(332)</b>	<b>(1,384)</b>	<b>(974)</b>	<b>431</b>	<b>1,120</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Pretax Income</b>	<b>(4,882)</b>	<b>(3,547)</b>	<b>(6,886)</b>	<b>(5,764)</b>	<b>(20,358)</b>	<b>(3,454)</b>	<b>(2,867)</b>	<b>(840)</b>	<b>(2,302)</b>	<b>(10,040)</b>	<b>12,546</b>	<b>35,610</b>	<b>87,164</b>	<b>152,663</b>	<b>257,560</b>	<b>321,483</b>	<b>363,247</b>	<b>394,501</b>	<b>414,503</b>	<b>411,791</b>
Income Tax Benefit (Provision)	-	-	-	1,092	1,092	-	-	-	(184)	(803)	1,255	4,273	13,075	27,479	54,088	77,156	101,709	130,185	136,786	135,891
<b>Tax Rate</b>	<b>0%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>	<b>10%</b>	<b>12%</b>	<b>15%</b>	<b>18%</b>	<b>21%</b>	<b>24%</b>	<b>28%</b>	<b>33%</b>	<b>33%</b>	<b>33%</b>
<b>GAAP Net Income (Loss)</b>	<b>(4,882)</b>	<b>(3,547)</b>	<b>(6,886)</b>	<b>(4,672)</b>	<b>(19,266)</b>	<b>(3,454)</b>	<b>(2,867)</b>	<b>(840)</b>	<b>(2,118)</b>	<b>(9,237)</b>	<b>11,291</b>	<b>31,337</b>	<b>74,089</b>	<b>125,183</b>	<b>203,472</b>	<b>244,327</b>	<b>261,638</b>	<b>264,316</b>	<b>277,717</b>	<b>275,900</b>
<b>GAAP-EPS</b>	<b>(0.15)</b>	<b>(0.11)</b>	<b>(0.21)</b>	<b>(0.14)</b>	<b>(0.62)</b>	<b>(0.10)</b>	<b>(0.08)</b>	<b>(0.02)</b>	<b>(0.05)</b>	<b>(0.25)</b>	<b>0.27</b>	<b>0.75</b>	<b>1.76</b>	<b>2.96</b>	<b>4.80</b>	<b>5.74</b>	<b>6.12</b>	<b>6.16</b>	<b>6.44</b>	<b>6.38</b>
GAAP-EPS (Dil)	(0.15)	(0.11)	(0.21)	(0.14)	(0.60)	(0.10)	(0.08)	(0.02)	(0.05)	(0.24)	0.27	0.75	1.76	2.96	4.80	5.74	6.12	6.16	6.44	6.38
Wgtd Avg Shrs (Bas) - '000s	31,931	32,267	32,366	32,450	32,253	33,981	36,483	41,593	41,635	38,423	41,739	41,906	42,074	42,243	42,412	42,582	42,752	42,924	43,096	43,268
Wgtd Avg Shrs (Dil) - '000s	31,931	32,267	32,366	32,450	32,253	33,981	36,483	41,593	41,635	38,423	41,739	41,906	42,074	42,243	42,412	42,582	42,752	42,924	43,096	43,268

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

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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.

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	22	81%	4	18%
Market Perform (Neutral)	5	19%	1	20%
Market Underperform (Sell)	0	0%	0	0%
Total	27	100%	5	19%

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