

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2023

Or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number: 001-36792

**CYTOSORBENTS CORPORATION**

(Exact name of registrant as specified in its charter)

Delaware

98-0373793

(State or other jurisdiction of  
incorporation or organization)

(I.R.S. Employer Identification No.)

305 College Road East

Princeton, New Jersey

(Address of principal executive offices)

08540

(Zip Code)

(732) 329-8885

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	CTSO	Nasdaq Capital Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐

Non-accelerated filer ☒

Accelerated filer ☐

Smaller reporting company ☒

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

As of August 1, 2023, there were 44,362,386 shares of the issuer's common stock outstanding.

**CytoSorbents Corporation**  
**FORM 10-Q**  
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This Quarterly Report on Form 10-Q includes our trademarks and trade names, such as “CytoSorb,” “CytoSorb XL,” “ECOS-300CY,” “BetaSorb,” “ContrastSorb,” “DrugSorb,” “HemoDefend-RBC,” “HemoDefend-BGA,” “K<sup>+</sup>ontrol” and “VetResQ,” which are protected under applicable intellectual property laws and are the property of CytoSorbents Corporation and our subsidiaries. This Quarterly Report on Form 10-Q also contains the trademarks, trade names and service marks of other companies, which are the property of their respective owners. Solely for convenience, trademarks, trade names and service marks referred to in this Quarterly Report on Form 10-Q may appear without the <sup>TM</sup>, ®, or <sup>SM</sup> symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, trade names and service marks. We do not intend our use or display of other parties’ trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

## PART I — FINANCIAL INFORMATION

### Item 1. Financial Statements.

#### CYTOSORBENTS CORPORATION CONSOLIDATED BALANCE SHEETS

	June 30, 2023 (Unaudited)	December 31, 2022
<b>ASSETS</b>		
Current Assets:		
Cash and cash equivalents	\$ 13,151,524	\$ 22,144,567
Grants and accounts receivable, net of allowance for doubtful accounts of \$66,448 as of June 30, 2023 and \$76,041 at December 31, 2022	7,024,625	5,664,941
Inventories	2,045,985	3,461,586
Prepaid expenses and other current assets	1,421,819	2,488,597
<b>Total current assets</b>	<b>23,643,953</b>	<b>33,759,691</b>
Property and equipment, net	10,501,365	10,743,032
Restricted cash	1,687,459	1,687,459
Right-of-use assets	12,333,970	12,603,901
Other assets	4,278,020	4,437,447
<b>Total Assets</b>	<b>\$ 52,444,767</b>	<b>\$ 63,231,530</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current Liabilities:		
Accounts payable	\$ 2,836,013	\$ 1,655,173
Lease liability – current portion	114,382	108,939
Accrued expenses and other current liabilities	7,400,735	7,950,440
<b>Total current liabilities</b>	<b>10,351,130</b>	<b>9,714,552</b>
Lease liability, net of current portion	12,977,512	13,142,005
Long-term debt	5,021,429	5,000,000
<b>Total Liabilities</b>	<b>28,350,071</b>	<b>27,856,557</b>
Commitments and Contingencies (Note 6)		
<b>Stockholders' Equity:</b>		
Preferred Stock, Par Value \$0.001, 5,000,000 shares authorized; -0- shares issued and outstanding at June 30, 2023 and December 31, 2022	—	—
Common Stock, Par Value \$0.001, 100,000,000 shares authorized; 44,193,696 and 43,635,715 shares issued and outstanding as of June 30, 2023 and December 31, 2022, respectively	44,193	43,635
Additional paid-in capital	290,199,035	287,000,021
Accumulated other comprehensive income	1,328,313	2,329,195
Accumulated deficit	(267,476,845)	(253,997,878)
<b>Total Stockholders' Equity</b>	<b>24,094,696</b>	<b>35,374,973</b>
<b>Total Liabilities and Stockholders' Equity</b>	<b>\$ 52,444,767</b>	<b>\$ 63,231,530</b>

See accompanying notes to consolidated financial statements.

**CYTOSORBENTS CORPORATION**  
**CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS**

	Three months ended June 30, 2023 (Unaudited)	2022 (Unaudited)	Six months ended June 30, 2023 (Unaudited)	2022 (Unaudited)
Revenue:				
CytoSorb sales	\$ 8,065,829	\$ 7,038,101	\$ 15,972,098	\$ 14,904,966
Other sales	6,583	292,634	10,353	350,226
Total product sales	8,072,412	7,330,735	15,982,451	15,255,192
Grant income	1,348,409	1,164,823	2,887,866	1,931,790
Total revenue	9,420,821	8,495,558	18,870,317	17,186,982
Cost of revenue	3,402,271	3,550,702	7,396,440	5,828,339
Gross margin	6,018,550	4,944,856	11,473,877	11,358,643
Other expenses:				
Research and development	3,668,804	4,183,462	7,883,219	8,426,827
Legal, financial and other consulting	1,185,031	679,077	1,854,264	1,479,812
Selling, general and administrative	7,723,952	8,439,367	16,187,226	17,600,189
Total expenses	12,577,787	13,301,906	25,924,709	27,506,828
Loss from operations	(6,559,237)	(8,357,050)	(14,450,832)	(16,148,185)
Other income (expense):				
Interest income (expense), net	(8,821)	23,973	(71,992)	32,000
Gain (loss) on foreign currency transactions	414,974	(2,523,006)	1,075,656	(3,736,296)
Miscellaneous income (expense)	—	(23,139)	(31,799)	6,861
Total other income (expense), net	406,153	(2,522,172)	971,865	(3,697,435)
Loss before benefit from income taxes	(6,153,084)	(10,879,222)	(13,478,967)	(19,845,620)
Benefit from income taxes	—	—	—	—
Net loss attributable to common stockholders	\$ (6,153,084)	\$ (10,879,222)	\$ (13,478,967)	\$ (19,845,620)
Basic and diluted net loss per common share	\$ (0.14)	\$ (0.25)	\$ (0.31)	\$ (0.46)
Weighted average number of shares of common stock outstanding	44,015,380	43,560,481	43,758,888	43,524,414
Net loss	\$ (6,153,084)	\$ (10,879,222)	\$ (13,478,967)	\$ (19,845,620)
Other comprehensive income (loss):				
Currency translation adjustment	(392,674)	2,053,215	(1,000,882)	3,016,126
Total comprehensive loss	\$ (6,545,758)	\$ (8,826,007)	\$ (14,479,849)	\$ (16,829,494)

See accompanying notes to consolidated financial statements.

**CYTOSORBENTS CORPORATION**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**  
**For the three and six months ended June 30, 2023 and 2022 (Unaudited)**

	Common Stock		Additional	Accumulated		Stockholders'
	Shares	Par value	Paid-In	Other	Accumulated	Equity
			Capital	Comprehensive	Deficit	
				Income (Loss)		
Balance at March 31, 2023	43,851,380	\$ 43,851	\$ 288,514,368	\$ 1,720,987	\$ (261,323,761)	\$ 28,955,445
Stock-based compensation - employees, consultants and directors	—	—	570,235	—	—	570,235
Other comprehensive loss: foreign translation adjustment	—	—	—	(392,674)	—	(392,674)
Issuance of common stock offerings, net of fees	230,605	231	776,060	—	—	776,291
Proceeds from exercise of stock options for cash	56,393	56	154,772	—	—	154,828
Issuance of restricted stock units	55,318	55	183,600	—	—	183,655
Net loss	—	—	—	—	(6,153,084)	(6,153,084)
Balance at June 30, 2023	44,193,696	\$ 44,193	\$ 290,199,035	\$ 1,328,313	\$ (267,476,845)	\$ 24,094,696
Balance at December 31, 2022	43,635,715	\$ 43,635	\$ 287,000,021	\$ 2,329,195	\$ (253,997,878)	\$ 35,374,973
Stock-based compensation - employees, consultants and directors	—	—	1,400,516	—	—	1,400,516
Other comprehensive income: foreign translation adjustment	—	—	—	(1,000,882)	—	(1,000,882)
Issuance of common stock offerings, net of fees	428,270	428	1,474,296	—	—	1,474,724
Proceeds from exercise of stock options for cash	74,393	75	197,304	—	—	197,379
Issuance of restricted stock units	55,318	55	183,600	—	—	183,655
Legal/audit fees related to ATM offering	—	—	(56,702)	—	—	(56,702)
Net loss	—	—	—	—	(13,478,967)	(13,478,967)
Balance at June 30, 2023	44,193,696	\$ 44,193	\$ 290,199,035	\$ 1,328,313	\$ (267,476,845)	\$ 24,094,696
Balance at March 31, 2022	43,505,948	\$ 43,505	\$ 284,047,729	\$ 1,488,496	\$ (230,151,693)	\$ 55,428,037
Stock-based compensation - employees, consultants and directors	—	—	761,272	—	—	761,272
Other comprehensive loss: foreign translation adjustment	—	—	—	2,053,215	—	2,053,215
Stock issued to vendor in lieu of cash payment	12,500	13	42,486	—	—	42,499
Issuance of restricted stock units	56,171	57	153,909	—	—	153,966
Net loss	—	—	—	—	(10,879,222)	(10,879,222)
Balance at June 30, 2022	43,574,619	\$ 43,575	\$ 285,005,396	\$ 3,541,711	\$ (241,030,915)	\$ 47,559,767
Balance at December 31, 2021	43,478,487	\$ 43,478	\$ 283,194,429	\$ 525,585	\$ (221,185,295)	\$ 62,578,197
Stock-based compensation - employees, consultants and directors	—	—	1,548,689	—	—	1,548,689
Other comprehensive income: foreign translation adjustment	—	—	—	3,016,126	—	3,016,126
Stock issued to vendor in lieu of cash payment	12,500	13	42,486	—	—	42,499
Issuance of restricted stock units	83,632	84	260,151	—	—	260,235
Legal/audit fees related to ATM offering	—	—	(40,359)	—	—	(40,359)
Net loss	—	—	—	—	(19,845,620)	(19,845,620)
Balance at June 30, 2022	43,574,619	\$ 43,575	\$ 285,005,396	\$ 3,541,711	\$ (241,030,915)	\$ 47,559,767

See accompanying notes to consolidated financial statements.

**CYTOSORBENTS CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Six months ended June 30, 2023 (Unaudited)	Six months ended June 30, 2022 (Unaudited)
Cash flows from operating activities:		
Net loss	\$ (13,478,967)	\$ (19,845,620)
Adjustments to reconcile net loss to net cash used in operating activities:		
Accrued Final Fee	21,429	—
Non-cash compensation	(105,488)	(226,014)
Depreciation and amortization	660,589	446,334
Amortization of right of use asset	110,881	129,045
Write off of patent cost	292,806	431,426
Bad debt expense (recovery)	13,384	24,354
Stock-based compensation	1,400,516	1,548,689
Foreign currency translation (gain) loss	(1,075,656)	3,736,296
Changes in operating assets and liabilities:		
Grants and accounts receivable	(1,271,716)	(943,398)
Inventories	1,449,881	(589,483)
Prepaid expenses and other current assets	1,649,776	1,360,675
Other assets	—	54,658
Accounts payable and accrued expenses	291,068	(2,286,125)
<b>Net cash used in operating activities</b>	<b>(10,041,497)</b>	<b>(16,159,163)</b>
Cash flows from investing activities:		
Purchases of property and equipment	(300,221)	(5,234,163)
Payments for patent costs	(242,378)	(298,800)
<b>Net cash used in investing activities</b>	<b>(542,599)</b>	<b>(5,532,963)</b>
Cash flows from financing activities:		
Equity contributions - net of fees incurred	1,418,022	(40,359)
Proceeds from exercise of stock options	197,379	—
<b>Net cash provided by (used in) financing activities</b>	<b>1,615,401</b>	<b>(40,359)</b>
Effect of exchange rates on cash	(24,348)	(241,167)
<b>Net change in cash, cash equivalents and restricted cash</b>	<b>(8,993,043)</b>	<b>(21,973,652)</b>
<b>Cash, cash equivalents and restricted cash - beginning of period</b>	<b>23,832,026</b>	<b>53,825,166</b>
<b>Cash, cash equivalents and restricted cash - end of period</b>	<b>\$ 14,838,983</b>	<b>\$ 31,851,514</b>
<b>Supplemental disclosure of cash flow information:</b>		
Cash paid during the period for interest	\$ 173,334	\$ —
<b>Supplemental disclosure of non-cash financing activities:</b>		
Issuance of common stock to vendor in lieu of cash payment	\$ —	\$ 42,499
Capital expenditures included in accounts payable	\$ —	\$ 229,824
Issuance of restricted stock units	\$ 183,655	\$ 260,235

See accompanying notes to consolidated financial statements.

**CytoSorbents Corporation**  
**Notes to Consolidated Financial Statements**  
**(UNAUDITED)**  
**June 30, 2023**

**1. BASIS OF PRESENTATION**

The interim consolidated financial statements of CytoSorbents Corporation (the “Company”) have been prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”). In the opinion of management, the Company has made all necessary adjustments, which include normal recurring adjustments, for a fair statement of the Company’s consolidated financial position and results of operations for the interim periods presented. Certain information and disclosures normally included in the annual consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted. These interim consolidated financial statements should be read in conjunction with the audited consolidated financial statements and accompanying notes for the year ended December 31, 2022 included in the Company’s Annual Report on Form 10-K, as filed with the Securities and Exchange Commission (the “SEC”) on March 9, 2023. The results for the three and six months ended June 30, 2023 are not necessarily indicative of the results to be expected for a full year, any other interim periods or any future year or period.

As of June 30, 2023, the Company’s cash and cash equivalents were approximately \$13.2 million, and approximately \$1.7 million in restricted cash, which is not expected to fund the Company’s operations beyond the next twelve months from the issuance of these consolidated financial statements. This matter raises substantial doubt about the Company’s ability to continue as a going concern. As a result, the accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company expects to raise additional capital in the future.

**2. PRINCIPAL BUSINESS ACTIVITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Nature of Business**

The Company is a leader in the treatment of life-threatening conditions in intensive care and cardiac surgery using blood purification. The Company, through its subsidiary CytoSorbents Medical, Inc. (formerly known as CytoSorbents, Inc.), is engaged in the research, development and commercialization of medical devices with its blood purification technology platform which incorporates a proprietary adsorbent, porous polymer technology. The Company, through its wholly owned European subsidiary, CytoSorbents Europe GmbH, conducts sales and marketing related operations for the CytoSorb device. In March 2016, the Company formed CytoSorbents Switzerland GmbH, a wholly owned subsidiary of CytoSorbents Europe GmbH. This subsidiary, which began operations during the second quarter of 2016, provides marketing and direct sales services in Switzerland. In November 2018, the Company formed CytoSorbents Poland Sp. z o.o., a wholly owned subsidiary of CytoSorbents Europe GmbH. This subsidiary, which began operations during the first quarter of 2019, provides marketing and direct sales services in Poland. In the third quarter of 2019, the Company formed CytoSorbents UK Limited, a wholly owned subsidiary of CytoSorbents Medical, Inc., which is responsible for the management of the Company’s clinical trial activities in the United Kingdom. In March 2022, the Company formed CytoSorbents Medical UK Limited to provide marketing and direct sales services in the United Kingdom and the Republic of Ireland. In October 2022, the Company formed CytoSorbents France SAS to provide marketing and direct sales services in France. In May 2023, the Company formed CytoSorbents India Private Limited to provide marketing and direct sales services in India. CytoSorb, the Company’s flagship product, was approved in the European Union (“EU”) in March 2011 and is currently being marketed and distributed in more than 75 countries around the world, as an effective extracorporeal cytokine absorber, designed to reduce the “cytokine storm” or “cytokine release syndrome” seen in critical illnesses that may result in massive inflammation, organ failure, and patient death. In May 2018, the Company received a label extension for CytoSorb covering use of the device for the removal of bilirubin and myoglobin which allows for the use of the device in the treatment of liver failure and trauma, respectively. CytoSorb is also being used during and after cardiac surgery to remove inflammatory mediators that can lead to post-operative complications, including multiple organ failure. In January 2020, CytoSorb received EU CE Mark label expansion to include the removal of ticagrelor during cardiopulmonary bypass in patients undergoing cardiothoracic surgery. In May 2020, CytoSorb also received EU CE Mark label expansion to include rivaroxaban removal for the same indication.

In April 2020, CytoSorb received United States Food and Drug Administration (“FDA”) Emergency Use Authorization (“EUA”) of CytoSorb for use in adult critically-ill COVID-19 patients with imminent or confirmed respiratory failure. The CytoSorb device has

neither been cleared nor approved for the indication to treat patients with COVID-19 infection. The EUA will be effective until a declaration is made that the circumstances justifying the EUA have terminated or until revoked by the FDA.

In April 2020, the Company also announced that the FDA had granted Breakthrough Designation for its DrugSorb-ATR Antithrombotic Removal System for the removal of ticagrelor in a cardiopulmonary bypass circuit during emergent and urgent cardiothoracic surgery. The Breakthrough Devices Program provides for more effective treatment of life-threatening or irreversibly debilitating disease or conditions, in this case the need to reverse the effects of ticagrelor in emergent or urgent cardiac surgery that can otherwise cause a high risk of serious or life-threatening bleeding. Through Breakthrough Designation, the FDA intends to work with CytoSorbents to expedite the development, assessment, and regulatory review of CytoSorbents' technology for the removal of ticagrelor, while maintaining statutory standards of regulatory approval (e.g., 510(k), de novo 510(k) or premarket approval) consistent with the FDA's mission to protect and promote public health. In July 2021, the Company received full approval of its Investigative Device Exemption ("IDE") to conduct the pivotal STAR-T (Safe and Timely Antithrombotic Removal – Ticagrelor) double-blind randomized control trial ("RCT") for up to 120 patients in the United States to support FDA marketing approval. In July 2023, the Company announced that the Company has completed enrollment in the STAR-T trial.

In August 2021, the Company announced that it was granted a second Breakthrough Device designation for its DrugSorb-ATR Antithrombotic Removal System by the FDA. This Breakthrough Device designation covers the removal of the Direct Oral Anticoagulants (DOACs) apixaban and rivaroxaban in a cardiopulmonary bypass circuit to reduce the likelihood of serious perioperative bleeding during urgent cardiothoracic surgery. In October 2021, the Company also received full FDA approval of an IDE application to conduct a double-blind, randomized, controlled clinical study for up to 120 patients entitled, "Safe and Timely Antithrombotic Removal – Direct Oral Anticoagulants (STAR-D)," in the United States to support FDA marketing approval.

If FDA marketing approval is obtained for either the removal of ticagrelor or direct oral anticoagulants indications, the device would be marketed as DrugSorb-ATR in the United States. The DrugSorb-ATR Antithrombotic Removal System is based on the same polymer technology as CytoSorb.

In May 2022, the Company announced that the Company entered into a 3-year preferred supplier agreement with Asklepios, making CytoSorb available without restrictions to all of the approximate 170 healthcare facilities across 14 states throughout Germany at which Asklepios operates. This includes Asklepios Klinik St. Georg in Hamburg, Germany, which pioneered the use of CytoSorb to remove antithrombotic drugs during cardiothoracic surgery, and is well-known for their seminal publication on CytoSorb use for this application during emergency cardiac surgery in patients at high risk of bleeding.

In June 2022, the Company announced that, following a successful pilot program in three countries, the Company signed an expanded non-exclusive agreement with Nikkiso Europe GmbH ("Nikkiso") to distribute Nikkiso's PureADJUST stand-alone hemoperfusion pump and accessories in a total of 14 countries. In addition to securing the rights to sell Nikkiso's stand-alone pump and accessories in Germany, Austria, and Luxembourg, the Company entered into an expanded multi-country reseller agreement with Nikkiso covering the following countries: Belgium, Bosnia and Herzegovina, Croatia, Finland, France, Iceland, Lichtenstein, Poland, Serbia, Slovenia and Switzerland. The Company will also be able to provide field support services in these countries.

In August 2022, the Company entered into a Marketing Agreement (the "Marketing Agreement") with Fresenius Medical Care Deutschland GmbH ("Fresenius"), which expands the Company's strategic partnership with Fresenius by establishing a multi-stage global collaboration to combat life-threatening diseases in critical care. The Marketing Agreement provides for the combined marketing and promotion of CytoSorb with Fresenius' critical care products by Fresenius' marketing organization worldwide, excluding the United States. The Marketing Agreement has an initial term of three years, with an automatic renewal for an additional two years at the end of such initial term, subject to earlier termination by either of the parties (the "Term"). Compared to the prior co-marketing agreement between the parties, the Marketing Agreement intends to increase the commitments from both parties and to ensure an ongoing and consistent level of marketing and promotional activity specifically focused around CytoSorb, where Fresenius will actively market and promote CytoSorb as the featured blood purification therapy for removal of cytokines, bilirubin, and myoglobin on its critical care platforms. Specifically, the Marketing Agreement provides that various Fresenius-led in-person, virtual, social media, and web-based marketing programs and events will feature the CytoSorb therapy and highlight the cooperation between the two companies in the field of critical care during the Term. To help support the increased marketing and promotional efforts of the expanded collaboration, CytoSorbents has agreed to subsidize a portion of the marketing costs through a royalty payment to Fresenius Medical Care based on CytoSorb sales in the intensive care unit on Fresenius Medical Care platforms, excluding the United States. In addition to strengthening and expanding the global marketing of CytoSorb, the Company and Fresenius also plan to work together to bring new innovative



solutions to the market. The Marketing Agreement also includes the certification of compatibility of CytoSorb for usage on Fresenius' current critical care platforms. The launch of this program is expected to occur in the second half of 2023.

The technology is based upon biocompatible, highly porous polymer sorbent beads that can actively remove toxic substances from blood and other bodily fluids by pore capture and surface adsorption. The Company has numerous products under development based upon this unique blood purification technology which, as of June 30, 2023, is protected by 19 issued U.S. patents and multiple international patents, with applications pending both in the U.S. and internationally, including HemoDefend, ContrastSorb, DrugSorb, DrugSorb-ATR and others. These patents and patent applications are directed to various compositions and methods of use related to the Company's blood purification technologies and are expected to expire between 2023 and 2038, absent any patent term extensions. Management believes that any near-term expiring patents will not have a significant impact on the Company's ongoing business.

### Stock Market Listing

On December 17, 2014, the Company's common stock, par value \$0.001 per share, was approved for listing on the Nasdaq Capital Market ("Nasdaq"), and it began trading on Nasdaq on December 23, 2014 under the symbol "CTSO." Previously, the Company's common stock traded in the over-the-counter-market on the OTC Bulletin Board.

### Basis of Consolidation and Foreign Currency Translation

The consolidated financial statements include the accounts of CytoSorbents Corporation and its wholly-owned subsidiaries, CytoSorbents Medical, Inc. and CytoSorbents Europe GmbH. In addition, the consolidated financial statements include CytoSorbents Switzerland GmbH, CytoSorbents Poland Sp. z o.o. and CytoSorbents Medical UK Limited, wholly owned subsidiaries of CytoSorbents Europe GmbH, and CytoSorbents UK Limited and CytoSorbents India Private Limited, wholly-owned subsidiaries of CytoSorbents Medical, Inc. All significant intercompany transactions and balances have been eliminated in consolidation.

Translation gains and losses resulting from the process of remeasuring into the United States Dollar, the foreign currency financial statements of the European subsidiary are included in operations. The Euro is the functional currency of CytoSorbents Europe GmbH. Foreign currency transaction gain (loss) included in net loss amounted to approximately \$415,000 and \$(2,523,000) for the three months ended June 30, 2023 and 2022, respectively. Foreign currency transaction (loss) included in net loss amounted to approximately \$1,076,000 and \$(3,736,000) for the six months ended June 30, 2023 and 2022, respectively. The Company translates assets and liabilities of its foreign subsidiaries at the exchange rate in effect at the consolidated balance sheet date. The Company translates revenue and expenses at the daily average exchange rates during the period. The Company includes accumulated net translation adjustments in accumulated other comprehensive income as a component of stockholders' equity.

### Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

The following table provides a reconciliation of cash and cash equivalents and restricted cash to amounts shown in the consolidated balance sheets:

	June 30, 2023	December 31, 2022
Cash and cash equivalents	\$ 13,151,524	\$ 22,144,567
Restricted cash	1,687,459	1,687,459
Total cash, cash equivalents and restricted cash	<u>\$ 14,838,983</u>	<u>\$ 23,832,026</u>

### Restricted Cash

The Company's total restricted cash in the amount of \$1,687,459 consists of cash of \$1,467,459 that the Company is obligated to maintain as collateral for the outstanding letter of credit with Bridge Bank that was provided to the landlord of the College Road facility as security and cash of \$220,000 that the Company is obligated to maintain as collateral for the credit limit on the Company's credit card accounts.

## **Grants and Accounts Receivable**

Grants receivable represent amounts due from U.S. government agencies and are included in grants and accounts receivable.

Accounts receivable are unsecured, non-interest bearing customer obligations due under normal trade terms. The Company sells its devices to various hospitals and distributors. The Company performs ongoing credit evaluations of its customers' financial conditions. Management reviews accounts receivable periodically to determine collectability. Balances that are determined to be uncollectible are written off to the allowance for doubtful accounts. The allowance for doubtful accounts amounted to approximately \$66,000 and \$76,000 as of June 30, 2023 and December 31, 2022, respectively.

## **Inventories**

Inventories are valued at the lower of cost or net realizable value under the first in, first out (FIFO) method. At June 30, 2023 and December 31, 2022, the Company's inventory was comprised of finished goods, which amounted to \$949,296 and \$1,567,871, respectively; work in process which amounted to \$578,480 and \$1,280,368, respectively; and raw materials, which amounted to \$518,209 and \$613,347, respectively. Devices used in clinical trials or for research and development purposes are removed from inventory and charged to research and development expenses at the time of their use. Donated devices are removed from inventory and charged to selling, general and administrative expenses.

## **Property and Equipment**

Property and equipment are recorded at cost less accumulated depreciation. Depreciation of property and equipment is provided for by the straight-line method over the estimated useful lives of the related assets. Leasehold improvements are amortized over the lesser of their economic useful lives or the term of the related leases. Gains and losses on depreciable assets retired or sold are recognized in the consolidated statements of operations and comprehensive loss in the year of disposal. Repairs and maintenance expenditures are expensed as incurred.

## **Patents**

Legal costs incurred to establish and successfully defend patents are capitalized. When patents are issued, capitalized costs are amortized on the straight-line method over the related patent term. In the event a patent is abandoned, the net book value of the patent is written off.

## **Impairment or Disposal of Long-Lived Assets**

The Company assesses the impairment of patents and other long-lived assets under accounting standards for the impairment or disposal of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. For long-lived assets to be held and used, the Company recognizes an impairment loss only if its carrying amount is not recoverable through its undiscounted cash flows and measures the impairment loss based on the difference between the carrying amount and fair value. During the three and six months ended June 30, 2023, the Company recorded an impairment charge of approximately \$21,000 and \$293,000, respectively, related to certain patent costs. During the three and six months ended June 30, 2022, the Company recorded an impairment charge of approximately \$126,000 and \$431,000, respectively, related to certain patent costs. This charge is included in legal, financial and other consulting in the consolidated statements of operations and comprehensive loss.

## **Revenue Recognition**

*Product Sales:* Revenues from sales of products to both direct and distributor/strategic partner customers are recognized at the time when control passes to the customer, in accordance with the terms of their respective contracts. Recognition of revenue occurs as each performance obligation is completed.

*Grant Revenue:* Revenue from grant income is based on contractual agreements. Certain agreements provide for reimbursement of costs, other agreements provide for reimbursement of costs and an overhead margin and certain agreements are performance based, where revenue is earned based upon the achievement of milestones outlined in the contract. Revenues are recognized when the associated performance obligation is fulfilled. Costs are recorded as incurred. Amounts invoiced in excess of costs actually incurred on fixed price

contracts are classified as deferred revenue and are included in accrued expenses and other current liabilities in the consolidated balance sheet. Costs subject to reimbursement by these grants have been reflected as costs of revenue.

#### **Research and Development and Clinical Trial Expenses**

All research and development costs, payments to laboratories and research consultants are expensed when incurred.

#### **Advertising Expenses**

Advertising expenses are included in selling, general, and administrative expenses on the consolidated statements of operations and comprehensive loss when incurred. Advertising expenses amounted to approximately \$38,000 and \$115,000 for the three months ended June 30, 2023 and 2022, respectively, and approximately \$93,000 and \$196,000 for the six months ended June 30, 2023 and 2022, respectively.

#### **Income Taxes**

Income taxes are accounted for under the asset and liability method prescribed by accounting standards for accounting for income taxes. Deferred income taxes are recorded for temporary differences between financial statement carrying amounts and the tax basis of assets and liabilities. Deferred tax assets and liabilities reflect the tax rates expected to be in effect for the years in which the differences are expected to reverse. A valuation allowance is provided if it is more likely than not that some or all of the deferred tax asset will not be realized. The Company has provided a valuation allowance against all deferred tax assets. Under Section 382 of the Internal Revenue Code, the net operating losses generated prior to the previously completed reverse merger may be limited due to the change in ownership. Additionally, net operating losses generated subsequent to the reverse merger may be limited in the event of changes in ownership.

The Company follows accounting standards associated with uncertain tax positions. The Company had no unrecognized tax benefits at June 30, 2023 or December 31, 2022. The Company files tax returns in the U.S. federal and state jurisdictions.

The Company utilizes the Technology Business Tax Certificate Transfer Program to sell a portion of its New Jersey Net Operating Loss carryforwards to an industrial company.

Each of CytoSorbents Europe GmbH, CytoSorbents Switzerland GmbH, CytoSorbents Poland Sp. Z.o.o., CytoSorbents Medical Limited, CytoSorbents UK Limited and CytoSorbents India Private Limited files an annual corporate tax return, VAT return and a trade tax return in Germany, Switzerland, Poland, the United Kingdom and India, respectively.

#### **Use of Estimates**

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets, liabilities at the date of the balance sheet, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. The valuation of options granted, allowance for doubtful accounts and recoverability of patents are significant estimates in these consolidated financial statements.

#### **Concentration of Credit Risk**

The Company maintains cash balances, at times, with financial institutions in excess of amounts insured by the Federal Deposit Insurance Corporation ("FDIC"). Beginning in April of 2023, the Company joined the IntraFi network, and established an Insured Cash Sweep ("ICS") account whereby all cash that was previously held in the Company's money market account at Bridge Bank is swept daily in increments of less than \$250,000 and deposited in a number of IntraFi's 4,000 member banks. This arrangement provides FDIC insurance coverage for all of the cash balances previously held in the money market account, which represents all of the cash and cash equivalents held at Bridge Bank. This arrangement excludes the restricted cash balances. Management monitors the soundness of these institutions in an effort to minimize its collection risk of these balances.

A significant portion of the Company's revenues are from product sales in Germany. Substantially all of the Company's grant and other income are from government agencies in the United States. (See Note 4 for further information relating to the Company's revenue.)

As of June 30, 2023, two distributors accounted for approximately 36% of outstanding grants and accounts receivable. As of December 31, 2022, two distributors accounted for approximately 27% of outstanding grants and accounts receivables. For the three months and six months ended June 30, 2023, one distributor accounted for approximately 12% and 11%, respectively, of the Company's total revenue and for the three and six months ended June 30, 2022, no distributor accounted for more than 10% of the Company's total revenue.

### **Financial Instruments**

The carrying values of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses and other current liabilities approximate their fair values due to their short-term nature.

### **Net Loss Per Common Share**

Basic loss per share is computed by dividing loss available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted loss per common share is computed using the treasury stock method utilizing the weighted-average number of shares of common stock plus the dilutive effect of potential common shares outstanding during the period. Dilutive potential common shares include outstanding stock options and restricted shares. The computation of diluted loss per share does not assume conversion, exercise or contingent exercise of securities that would have an anti-dilutive effect on earnings (see Note 8).

### **Stock-Based Compensation**

The Company accounts for its stock-based compensation under the recognition requirements of accounting standards for accounting for stock-based compensation, for employees and directors, whereby each option granted is valued at fair market value on the date of grant. Under these accounting standards, the fair value of each option is estimated on the date of grant using the Black-Scholes option pricing model.

The Company also follows the guidance of accounting standards for accounting for equity instruments that are issued to other than employees for acquiring, or in conjunction with selling, goods or services for equity instruments issued to consultants.

### **Shipping and Handling Costs**

The cost of shipping product to customers and distributors is typically borne by the customer or distributor. The Company records other shipping and handling costs in cost of revenue. Total freight costs amounted to approximately \$122,000 and \$18,000, respectively, for the three months ended June 30, 2023 and 2022, and \$200,000 and \$87,000, respectively, for the six months ended June 30, 2023 and 2022.

### **Effect of Recent Accounting Pronouncements**

In June 2016, the Financial Accounting Standards Board, issued Accounting Standards Update ("ASU") No. 2016-13 entitled, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments". This ASU provides guidance on the calculation of credit losses, which includes the allowance for doubtful accounts on trade accounts receivable. The updated guidance is effective for public entities for fiscal years beginning after December 15, 2022. The Company implemented the updated guidance during the six months ended June 30, 2023, and this did not have significant impact on its consolidated financial statements.

## **3. STOCKHOLDERS' EQUITY**

### **Preferred Stock**

In June 2019, the Company amended and restated its certificate of incorporation. The amended and restated certificate of incorporation authorizes the issuance of up to 5,000,000 shares of "blank check" preferred stock, with such designation rights and preferences as may be determined from time to time by the Board of Directors.

**Common Stock**

In June 2019, the Company amended and restated its certificate of incorporation. The amended and restated certificate of incorporation increased the number of shares of common stock authorized for issuance from 50,000,000 shares to 100,000,000 shares.

**Shelf Registration**

On July 14, 2021, the Company filed a registration statement on Form S-3 with the SEC, which was amended on July 20, 2021 and declared effective by the SEC on July 27, 2021 (as amended, the “2021 Shelf”). The 2021 Shelf enables the Company to offer and sell, in one or more offerings, any combination of common stock, preferred stock, senior or subordinated debt securities, warrants and units, up to a total dollar amount of \$150 million.

**Open Market Sale Agreement with Jefferies LLC**

On December 30, 2021, the Company entered into an Open Market Sale Agreement (the “Sale Agreement”) with Jefferies LLC (the “Agent”), pursuant to which the Company may sell, from time to time, at its option, shares of the Company’s common stock having an aggregate offering price of up to \$25 million through the Agent, as the Company’s sales agent. All shares of the Company’s common stock offered and sold, or to be offered and sold under the Sale Agreement will be issued and sold pursuant to the Company’s 2021 Shelf by methods deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, in block transactions or if specified by the Company, in privately negotiated transactions.

Subject to the terms of the Sales Agreement, the Agent is required to use its commercially reasonable efforts consistent with their normal sales and trading practices to sell the shares of the Company’s common stock from time to time, based upon the Company’s instructions (including any price, time or size limits or other customary parameters or conditions the Company may impose). The Company is required to pay the Agent a commission of up to 3.0% of the gross proceeds from the sale of the shares of the Company’s common stock sold thereunder, if any. There were no sales under the Sale Agreement during the year ended December 31, 2022. During the six months ended June 30, 2023, the Company sold 428,270 shares pursuant to the Amended Sale Agreement, at an average selling price of \$3.55 per share, generating net proceeds of approximately \$1,475,000. During the period from July 1, 2023 through July 31, 2023, the Company sold 162,078 shares pursuant to the Sale Agreement, at an average selling price of \$4.02 per share, generating net proceeds of approximately \$632,000. In the aggregate, through July 31, 2023, the Company has sold 590,348 shares pursuant to the Sale Agreement, at an average selling price of \$3.68 per share, generating net proceeds of approximately \$2,107,000. In addition, during the year ended December 31, 2022 and during the six months ended June 30, 2023, the Company paid approximately \$90,000 and \$57,000, respectively, in expenses related to the Sale Agreement.

**Stock-Based Compensation**

Total share-based employee, director, and consultant compensation amounted to approximately \$570,000 and \$1,401,000 for the three and six months ended June 30, 2023, respectively, and approximately \$761,000 and \$1,549,000 for the three and six months ended June 30, 2022, respectively. These amounts are included in the consolidated statements of operations and comprehensive loss under selling, general, and administrative expenses.

The summary of the stock option activity for the six months ended June 30, 2023 is as follows:

	Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Life (Years)
Outstanding, December 31, 2022	9,474,824	\$ 4.66	7.36
Granted	154,000	\$ 2.81	—
Forfeited	(398,517)	\$ 2.54	—
Expired	(332,405)	\$ 4.95	—
Exercised	(74,393)	\$ 2.65	—
Outstanding, June 30, 2023	<u>8,823,509</u>	\$ 4.73	6.92

The fair value of each stock option was estimated using the Black Scholes pricing model, which takes into account as of the grant date the exercise price (ranging from \$1.55 to \$3.50 per share) and expected life of the stock option (10 years), the current price of the underlying stock and its expected volatility (70.6%), expected dividends (0)% on the stock and the risk free interest rate (ranging from 3.50% to 4.22%) for the expected term of the stock option.

The intrinsic value is calculated as the difference between the market value of the shares as of June 30, 2023 of \$3.59 and the exercise price of the shares.

Options Outstanding				
Range of Exercise Price	Number Outstanding at June 30, 2023	Weighted Average Exercise Price	Weighted Average Remaining Life (Years)	Aggregate Intrinsic Value
\$1.11 - \$13.20	8,823,509	\$ 7.96	6.92	\$ 5,959,806

  

Options Exercisable		
Number Exercisable at June 30, 2023	Weighted Average Exercise Price	Aggregate Intrinsic Value
5,236,485	\$ 6.14	\$ 921,086

The summary of the status of the Company's non-vested options for the six months ended June 30, 2023 is as follows:

	Shares	Weighted Average Grant Date Fair Value
Non-vested, December 31, 2022	4,851,739	\$ 1.84
Granted	154,000	\$ 1.84
Forfeited	(398,517)	\$ 1.52
Vested	(1,020,198)	\$ 2.79
Non-vested, June 30, 2023	<u>3,587,024</u>	<u>\$ 1.61</u>

As of June 30, 2023, the Company had approximately \$3,188,000 of total unrecognized compensation cost related to stock options which will be amortized over approximately 44 months.

On August 10, 2022, the Board of Directors granted options to purchase 1,365,000 shares of common stock to certain senior managers of the Company which will only vest upon the achievement of certain specific, predetermined milestones related to the Company's long-term performance goals. The grant date fair value of these unvested options amounted to approximately \$1,620,000. As of June 30, 2023, none of these milestones has been met. Accordingly, no charge for these options has been recorded in the consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2023.

#### *Change in Control-Based Awards of Restricted Stock Units:*

The Board of Directors has granted restricted stock units to members of the Board of Directors, to the Company's executive officers, and to employees of the Company. These restricted stock units will only vest upon a Change in Control of the Company, as defined in the Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan.

The following table is a summary of these restricted stock units:

	Restricted Stock Units				Intrinsic Value
	Board of Directors	Executive Management	Other Employees	Total	
December 31, 2022	346,500	779,500	1,764,500	2,890,500	\$ 4,480,275
Granted	—	—	102,000	102,000	
Forfeited	—	—	(173,000)	(173,000)	
June 30, 2023	346,500	779,500	1,693,500	2,819,500	\$ 10,122,005

Due to the uncertainty over whether these restricted stock units will vest, which only happens upon a Change in Control, no charge for these restricted stock units has been recorded in the consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2023 and 2022.

*Other Awards of Restricted Stock Units:*

On February 28, 2020, certain named executive officers and senior managers were granted 168,100 restricted stock units. These awards were valued at approximately \$1,014,000 at the date of issuance, based upon the market price of the Company's common stock at the date of the grant, and vested one-third on the date of the grant, one-third on the first anniversary of the date of the grant, and one-third on the second anniversary of the date of the grant. For the three and six months ended June 30, 2023 and 2022, the Company recorded expense of approximately \$0 and \$0, respectively, and \$0 and \$84,000, respectively, related to these restricted stock unit awards.

On April 12, 2021, certain named executive officers and senior managers were granted 235,765 restricted stock units. These awards were valued at approximately \$2,220,000 at the date of issuance, based upon the market price of the Company's common stock at the date of the grant, and vested (or will vest) one-third on the date of the grant, one-third on the first anniversary of the date of the grant, and one-third on the second anniversary of the date of the grant. For the three and six months ended June 30, 2023 and 2022, the Company recorded (income) expense of approximately \$(422,000) and \$(245,000), respectively, and \$(304,000) and \$854,000, respectively, related to these restricted stock unit awards.

On August 10, 2022, certain named executive officers and senior managers were granted 288,500 restricted stock units. These awards were valued at approximately \$563,000 at the date of issuance, based upon the market price of the Company's common stock at the date of the grant, and vested (or will vest) one-third on the date of the grant, one-third on the first anniversary of the date of the grant, and one-third on the second anniversary of the date of the grant. For the three and six months ended June 30, 2023, the Company recorded a charge of approximately \$47,000 and \$94,000, respectively, related to these restricted stock unit awards.

In 2023, an employee was awarded 30,000 restricted stock units, as a condition of her employment. These awards were valued at \$64,200 at the date of issuance. Also in 2023, 2,500 restricted stock units were forfeited. The remaining unvested restricted stock awards will vest based upon a change of control or over the next two to four years, whichever occurs first. For the three and six months ended June 30, 2023 and 2022, the Company recorded a charge (income) of approximately \$19,000 and \$46,000, respectively, and \$(82,000) and \$33,000, respectively, related to all restricted stock units.

The following table outlines the restricted stock unit activity for the six months ended June 30, 2023:

	Shares	Weighted Average Grant Date Fair Value
Non-vested, December 31, 2022	312,092	\$ 4.42
Granted	30,000	\$ 2.14
Vested	(78,589)	\$ 8.99
Forfeited	(2,500)	\$ 5.85
Non-vested, June 30, 2023	261,003	\$ 2.77

#### 4. REVENUE

The following table disaggregates the Company's revenue by customer type and geographic area for the three months ended June 30, 2023:

	Direct	Distributors/ Strategic Partners	United States Government Agencies	Total
Product sales:				
United States	\$ 6,583	\$ —	\$ —	\$ 6,583
Germany	3,168,448	—	—	3,168,448
All other countries	1,493,725	3,403,656	—	4,897,381
Total product revenue	4,668,756	3,403,656	—	8,072,412
Grant and other income:				
United States	—	—	1,348,409	1,348,409
Total revenue	<u>\$ 4,668,756</u>	<u>\$ 3,403,656</u>	<u>\$ 1,348,409</u>	<u>\$ 9,420,821</u>

The following table disaggregates the Company's revenue by customer type and geographic area for the three months ended June 30, 2022:

	Direct	Distributors/ Strategic Partners	United States Government Agencies	Total
Product sales:				
United States	\$ 292,634	\$ 18,000	\$ —	\$ 310,634
Germany	2,982,769	—	—	2,982,769
All other countries	1,061,901	2,975,431	—	4,037,332
Total product revenue	4,337,304	2,993,431	—	7,330,735
Grant and other income:				
United States	—	—	1,164,823	1,164,823
Total revenue	<u>\$ 4,337,304</u>	<u>\$ 2,993,431</u>	<u>\$ 1,164,823</u>	<u>\$ 8,495,558</u>

The following table disaggregates the Company's revenue by customer type and geographic area for the six months ended June 30, 2023:

	Direct	Distributors/ Strategic Partners	United States Government Agencies	Total
Product sales:				
United States	\$ 10,353	\$ —	\$ —	\$ 10,353
Germany	6,506,352	—	—	6,506,352
All other countries	2,996,324	6,469,422	—	9,465,746
Total product revenue	9,513,029	6,469,422	—	15,982,451
Grant and other income:				
United States	—	—	2,887,866	2,887,866
Total revenue	<u>\$ 9,513,029</u>	<u>\$ 6,469,422</u>	<u>\$ 2,887,866</u>	<u>\$ 18,870,317</u>



The following table disaggregates the Company's revenue by customer type and geographic area for the six months ended June 30, 2022:

	Direct	Distributors/ Strategic Partners	United States Government Agencies	Total
Product sales:				
United States	\$ 350,226	\$ 172,750	\$ —	\$ 522,976
Germany	6,766,295	—	—	6,766,295
All other countries	2,266,832	5,699,089	—	7,965,921
Total product revenue	9,383,353	5,871,839	—	15,255,192
Grant and other income:				
United States	—	—	1,931,790	1,931,790
Total revenue	\$ 9,383,353	\$ 5,871,839	\$ 1,931,790	\$ 17,186,982

The Company has two primary revenue streams: (1) sales of the CytoSorb device and related device accessories and (2) grant income from contracts with various agencies of the United States government. The following is a brief description of each revenue stream.

#### *CytoSorb Sales*

The Company sells its CytoSorb device using both its own sales force (direct sales) and through the use of distributors and/or strategic partners.

The majority of sales of the device are outside the United States, as CytoSorb is not yet approved for commercial sale in the United States. However, in April 2020, the Company was granted U.S. Emergency Use Authorization ("EUA") of CytoSorb for use in critically-ill patients infected with COVID-19 with imminent or confirmed respiratory failure by the United States Food and Drug Administration (the "FDA"). Direct sales outside the United States relate to sales to hospitals located in Germany, Switzerland, Austria, Belgium, Luxembourg, Poland, the Netherlands, Sweden, Denmark, Norway and the United Kingdom. Direct sales are fulfilled from the Company's warehouse facility in Berlin, Germany. There are no formal sales contracts with any direct customers relating to product price or minimum purchase requirements. However, there are agreements in place with certain direct customers that provide for either free of charge product or rebate credits based upon achieving minimum purchase levels. The Company records the value of these items earned as a reduction of revenue. These customers submit purchase orders and the order is fulfilled and shipped directly to the customer. Prices to all direct customers are based on a standard price list based on the packaged quantity (6 packs versus 12 packs).

Distributor and strategic partner sales make up the remaining product sales. These distributors are located in various countries throughout the world. The Company has a formal written contract with each distributor/strategic partner. These contracts have terms ranging from 1-5 years in length, with three years being the typical term. In addition, certain distributors are eligible for volume discount pricing if their unit sales are in excess of the base amount in the contract.

Most distributor's/strategic partner's contracts have minimum annual purchase requirements in order to maintain exclusivity in their respective territories.

There is no additional consideration or monetary penalty that would be required to be paid to the Company if a distributor does not meet the minimum purchase commitments included in the contract, however, at the discretion of the Company, the distributor may lose its exclusive rights in the territory if such commitments are not met.

#### *Government Grants*

The Company has been the recipient of various grant contracts from various agencies of the United States government, primarily the Department of Defense, to perform various research and development activities. These contracts fall into one of the following categories:

1. Fixed price – the Company invoices the contract amount in equal installments over the term of the contract without regard to the timing of the costs incurred related to this contract. If billings on fixed price contracts exceed the costs incurred, revenue will be deferred to the extent of the excess billings.

2. Cost reimbursement – the Company submits monthly invoices during the term of the contract for the amount of direct costs incurred during that month plus an agreed upon percentage that relates to allowable overhead and general and administrative expenses. Cumulative amounts invoiced may not exceed the maximum amount of funding stipulated in the contract.
3. Cost plus – this type of contract is similar to a cost reimbursement contract but this type also allows for the Company to additionally invoice for a fee amount that is included in the contract.
4. Performance based – the Company submits invoices only upon the achievement of the milestones listed in the contract. The amount to be invoiced for each milestone is documented in the contract.

These government contracts have terms ranging from three months to four years. The Company may apply for an extension of the term of the contract in order to complete its research and development activities but would not receive additional funding during the extension period in excess of the original contract. See Note 2 regarding the accounting policies related to these contracts.

In summary, the contracts the Company has with customers are the distributor/strategic partner contracts related to CytoSorb product sales, agreements with direct customers related to free-of-charge product and credit rebates based upon achieving minimum purchase levels, and contracts with various government agencies related to the Company's grants. The Company does not currently incur any outside/third party incremental costs to obtain any of these contracts. The Company does incur internal costs, primarily salary related costs, to obtain the contracts related to the grants. Company employees spend time reviewing the program requirements and developing the budget and related proposal to submit to the grantor agency. There may additionally be travel expenditures involved with meeting with government agency officials during the negotiation of the contract. These internal costs are expensed as incurred.

The following table provides information about receivables and contract liabilities from contracts with customers:

	June 30, 2023	December 31, 2022
Receivables, which are included in grants and accounts receivable	\$ 4,755,150	\$ 3,822,452
Contract liabilities, which are included in accrued expenses and other current liabilities	\$ 1,581,649	\$ 1,682,837

Contract receivables represent balances due from product sales to distributors amounting to \$4,006,006 and \$2,944,031 at June 30, 2023 and December 31, 2022, respectively, and billed and unbilled amounts due on government contracts amounting to \$749,144 and \$878,421 at June 30, 2023 and December 31, 2022, respectively.

Contract liabilities represent the value of free of charge goods and credit rebates earned in accordance with the terms of certain direct customer agreements, which amounted to \$145,370 and \$166,065 as of June 30, 2023 and December 31, 2022, respectively, and deferred grant revenue related to the billing on fixed price contracts in excess of costs incurred, which amounted to \$1,436,279 and \$1,516,772 at June 30, 2023 and December 31, 2022, respectively.

## 5. LONG-TERM DEBT, NET

On June 30, 2016, the Company and its wholly owned subsidiary, CytoSorbents Medical, Inc. (together, the “Borrower”), entered into a Loan and Security Agreement with Bridge Bank, a division of Western Alliance Bank, (the “Bank”), pursuant to which the Company borrowed \$10 million in two equal tranches of \$5 million (the “Original Term Loans”). On March 29, 2018, the Original Term Loans were refinanced with the Bank pursuant to an Amended and Restated Loan and Security Agreement by and between the Bank and the Borrower (the “Amended and Restated Loan and Security Agreement”), under which the Bank agreed to loan the Borrower up to an aggregate of \$15 million to be disbursed in two tranches (1) one tranche of \$10 million (the “Term A Loan”), which was funded on the Closing Date and used to refinance the Original Term Loans, and (2) a second tranche of \$5 million which may be disbursed at the Borrower’s sole request prior to March 31, 2019 provided certain conditions are met (the “Term B Loan” and together with the Term A Loan, the “Term Loans”). On July 31, 2019, the Borrower entered into the First Amendment to the Amended and Restated Loan and Security Agreement (the “First Amendment”) with the Bank, which amended certain provisions of the Amended and Restated Loan and Security Agreement and the 2018 Success Fee Letter (the “2018 Letter”). In connection with the execution of the First Amendment, the draw period for the Term B Loan was extended to August 15, 2019 and the Company drew down the full \$5.0 million Term B Loan on the Settlement Date, bringing the total outstanding debt to \$15 million at July 31, 2019. The proceeds of Term Loans were used for general business requirements in accordance with the Amended and Restated Loan and Security Agreement. On December 4, 2020 (the “Third Amendment Closing Date”), the Company closed on the Third Amendment (the “Third Amendment”) of its Amended Loan and Security Agreement with Bridge Bank. Under the terms of the Amendment, the Company repaid the outstanding principal balance of its existing \$15 million term loans and simultaneously received a commitment from Bridge Bank to provide a new term loan of \$15 million, if needed. On January 19, 2022 (the “Fourth Amendment Closing Date”), the Company closed on the Fourth Amendment (the “Fourth Amendment”) of its Amended Loan and Security Agreement with Bridge Bank. Under the terms of the Amendment, the Company received a commitment from Bridge Bank to provide a new term loan of up to \$15 million, if needed, and entered into the Fourth Amendment Success Fee Letter (the “2022 Success Fee Letter”). On December 28, 2022 (the “Fifth Amendment Date”), the Company entered into the Fifth Amendment of its Amended Loan and Security Agreement with Bridge Bank. The Fifth Amendment extends the draw period under the Fourth Amendment to the earlier of (i) March 1, 2023 and (ii) the occurrence of an Event of Default. On March 9, 2023, the Company entered into the Sixth Amendment of its Amended Loan and Security Agreement. The Sixth Amendment further extended the draw period to March 24, 2023. Therefore, no further draws are available as of the date of this filing.

The Fourth Amendment provides a tranche of term loans (the “Term C Loans”) in the aggregate amount of \$15 million, which are available for the Company to draw down at its sole discretion in three tranches of \$5 million each at any time during the period commencing on the Fourth Amendment Date and ending on the earlier of (i) December 31, 2022 and (ii) the occurrence of an Event of Default (as defined in the Amended Loan and Security Agreement). The Term C Loans shall bear interest at the Index Rate (defined in the Amendment as the greater of 3.25% or the Prime Rate as published by the Wall Street Journal on the last business date of the month immediately preceding the month in which the interest will accrue) plus 1.25%. Pursuant to the Fourth Amendment, interest on the Term C Loans is subject to an interest rate cap of 8.00%. On December 27, 2022, the Company drew down the first \$5 million tranche of the Term C loans available under the terms of the Fourth Amendment. Under the terms of the Fourth Amendment, commencing on February 1, 2023, the Company is required to make monthly payments of interest only through December 2023. The interest-only period will be further extended through June 2024 provided the Company has met both the required reserves test and the seventy-five percent test, as set forth in the Fourth Amendment, as of November 30, 2023. Commencing on January 1, 2024, if the Company does not meet both the required reserves test and the 75% test, the Company shall make equal monthly payments of principal of \$208,333, together with accrued and unpaid interest. Commencing on July 1, 2024, if the Company meets both the required reserves test and the 75% test, the Company shall make equal monthly payments of principal of \$277,778, together with accrued and unpaid interest. In either event, all unpaid principal and accrued and unpaid interest shall be due and payable in full on December 1, 2025.

On the Fourth Amendment Closing Date, the Company was required to pay a non-refundable closing fee of approximately \$18,750, which was amortized as a monthly charge to interest expense. On the Third Amendment Closing Date, the Company paid a non-refundable closing fee of \$75,000, which was amortized as a charge to interest expense. In addition, the Amended and Restated Loan and Security Agreement requires the Company to pay a non-refundable final fee equal to 2.5% of the principal amount of the Term Loan funded upon the earlier of the (i) the maturity date or (ii) termination of the Term Loans via acceleration or prepayment. This final fee is being accrued and charged to interest expense over the term of the loan. For the three and six months ended June 30, 2023, the Company recorded interest expense of approximately \$10,714 and \$21,429 related to the final fee. The Term Loans are evidenced by a secured promissory note issued to the Bank by the Company. If the Company elects to prepay the Term Loans pursuant to the terms of the Amended and Restated Loan and Security Agreement, it will owe a prepayment fee to the Bank, as follows: (1) for a prepayment made on or after the funding date of a Term Loan through and including the first anniversary of such funding date, an amount equal to 2.0% of the principal amount of such Term Loan prepaid; (2) for a prepayment made after the first anniversary of the funding date of a Term Loan through and including the second anniversary of such funding date, an amount equal to 1.5% of the principal amount of such Term Loan prepaid; and (3) for a prepayment made after the second anniversary of the funding date of a Term Loan, an amount equal to 1.0% of the principal amount of such Term Loan prepaid.

The Company's and CytoSorbents Medical, Inc.'s obligations under the Amended and Restated Loan and Security Agreement are joint and severable and are secured by a first priority security interest in favor of the Bank with respect to the Company's Shares (as defined in the Amended and Restated Loan and Security Agreement) and the Borrower's Collateral (as defined in the Amended and Restated Loan and Security Agreement, which definition excludes the Borrower's intellectual property and other customary exceptions).

#### **2018 Success Fee Letter:**

Pursuant to the amended 2018 Letter, the Borrower shall pay to the Bank a success fee in the amount equal to 6.37% of the funded amount of the Term B Loan (as defined in the Restated Loan and Security Agreement) (the "Success Fee") upon the first occurrence of any of the following events: (a) a sale or other disposition by the Borrower of all or substantially all of its assets; (b) a merger or consolidation of the Borrower into or with another person or entity, where the holders of the Borrower's outstanding voting equity securities as of immediately prior to such merger or consolidation hold less than a majority of the issued and outstanding voting equity securities of the successor or surviving person or entity as of immediately following the consummation of such merger or consolidation; (c) a transaction or a series of related transactions in which any "person" or "group" (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of a sufficient number of shares of all classes of stock then outstanding of the Borrower ordinarily entitled to vote in the election of directors, empowering such "person" or "group" to elect a majority of the Board of Directors of the Borrower, who did not have such power before such transaction; or (d) the closing price per share for the Company's common stock on the Nasdaq Capital Market being the greater of (i) 70% or more over \$7.05, the closing price of the Company's common stock on March 29, 2018 (after giving effect to any stock splits or consolidations effected after the date thereof) for five successive business days, or (ii) at least 26.13% more than the average price of Company's common stock for the 365-day period ending on the date of the funding of the Term B Loan. This obligation shall terminate on the fifth anniversary of the funding of the Term B Loan and shall survive the termination of the loan agreement and the prepayment of the Term B Loan.

#### **2022 Success Fee Letter:**

Pursuant to the 2022 Success Fee Letter, the Borrower will pay to the Bank a success fee equal to (i) 1% of \$5 million if the Company draws down the first tranche of the Term C Loan and is payable only if the Company's stock price equals or exceeds \$8 for five consecutive trading days; (ii) 1.5% of \$5 million if the Company draws down the second tranche of the Term C Loan and is payable only if the Company's stock price equals or exceeds \$10 for five consecutive trading days; and (iii) 2% of \$5,000,000 if the Company draws down the third tranche of the Term C Loan and is payable only if the Company's stock price equals or exceeds \$12 for five consecutive trading days (together, the "Success Fee"). Borrower may pay the Success Fee in cash or in shares of common stock, at Borrower's sole discretion. The right of Bank to receive the Success Fees and the obligation of the Borrower to pay the Success Fees hereunder shall terminate on the date that is the fifth anniversary of the funding date of the last Term C Loans made but shall survive the termination of the Loan Agreement and any prepayment of the Term C Loans.

Long-term debt consists of the following as of June 30, 2023:

Principal amount	\$ 5,000,000
Accrued final fee	21,429
Subtotal	5,021,429
Less Current maturities	—
Long-term debt net of current maturities	<u>\$ 5,021,429</u>

Principal payments of long-term debt are due as follows during the periods ending June 30:

2024	\$ —
2025	3,333,337
2026	1,666,663
Total	<u>\$ 5,000,000</u>

## 6. COMMITMENTS AND CONTINGENCIES

### Payroll Tax Examination

In December 2021, the Company was notified that its European subsidiary, CytoSorbents Europe GmbH, would be subject to an audit of their payroll tax and social cost filings for the four-year period from 2018 through 2021. The Company has determined that payroll taxes and social costs were not paid on certain employee expense reimbursements as is required by German tax rules. Accordingly, the Company has accrued approximately \$598,000 as an estimate of this liability as of December 31, 2021. In January 2023, the Company received an assessment from the German tax authorities for the payroll tax audit of approximately \$90,000. In addition, it was determined that the Company would owe additional social security and VAT taxes related to this matter of approximately \$83,000. Accordingly, the Company has adjusted its accrual related to this payroll tax audit to approximately \$173,000 as of December 31, 2022. As of June 30, 2023, approximately \$84,000 remains accrued. This liability is included in accrued expenses and other current liabilities in the consolidated balance sheet as of December 31, 2022 and June 30, 2023. The expense related to this examination was included in selling, general and administrative expenses on the consolidated statements of operations and comprehensive loss.

### Employment Agreements

On July 30, 2019, CytoSorbents Corporation entered into amended and restated executive employment agreements with its principal executives, Dr. Phillip P. Chan, Chief Executive Officer, Vincent Capponi, President and Chief Operating Officer, and Kathleen P. Bloch, the Company's former Chief Financial Officer. Each of the agreements has an initial term of three years and was retroactively effective as of January 1, 2019. On April 12, 2020, CytoSorbents Corporation entered into an executive employment agreement with Dr. Efthymios Deliargyris, who began employment as Chief Medical Officer on May 1, 2020, with an initial term that expired on December 31, 2021. After the expiration of the initial terms, the employment agreements will automatically renew for additional terms of one year unless either party provides written notice of non-renewal at least 60 days prior to a renewal. In January 2023, these employment agreements automatically renewed for an additional one year.

The foregoing employment agreements each provide for base salary and other customary benefits which include participation in group insurance plans, paid time off and reimbursement of certain business-related expenses, including travel and continuing educational expenses, as well as bonus and/or equity awards at the discretion of the Board of Directors. In addition, the agreements provide for certain termination benefits in the event of termination without "Cause" or voluntary termination of employment for "Good Reason", as defined in each agreement. The agreements also provide for certain benefits in the event of a "Change of Control" of the Company, as defined in each agreement.

Effective March 31, 2023, Ms. Bloch retired from her role as Chief Financial Officer of the Company. Ms. Bloch's employment agreement expired on March 31, 2023, upon her retirement from the Company. In connection with Ms. Bloch's retirement, the Company and Ms. Bloch entered into a Consulting Agreement, dated as of March 31, 2023 (the "Consulting Agreement"), pursuant to which Ms. Bloch will serve as a consultant to the Company and as the Company's Interim Chief Financial Officer. In accordance with the terms of the Consulting Agreement, Ms. Bloch will continue to provide services to the Company which are customary in scope to those typically provided by a public company Chief Financial Officer. Unless terminated earlier by Ms. Bloch or by the Company upon fourteen days written notice, the Consulting Agreement will remain in effect until December 31, 2025, and thereafter as mutually agreed between the Company and Ms. Bloch.

### **Litigation**

The Company is, from time to time, subject to claims and litigation arising in the ordinary course of business. The Company intends to defend vigorously against any future claims and litigation. The Company is expected to settle a litigation matter. As part of the expected settlement agreement, the Company estimates that it will be required pay a total of \$280,000 to settle this matter in return for a release of all claims against the Company. This liability is included in accrued expenses and other current liabilities in the consolidated balance sheet as of June 30, 2023. The expense related to this settlement is included in legal financial and other consulting expenses on the consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2023.

The Company is not currently a party to any other litigation.

### **Royalty Agreement**

Pursuant to an agreement dated August 11, 2003, an existing investor agreed to make a \$4 million equity investment in the Company. These amounts were received by the Company in 2003. In connection with this agreement the Company granted the investor a perpetual royalty of 3% on all gross revenues received by the Company from the sale of its CytoSorb device which such rights were assigned to an existing investor in 2017. For the three months ended June 30, 2023 and 2022, the Company recorded royalty expenses of approximately \$240,000 and \$208,000, respectively. For the six months ended June 30, 2023 and 2022, the Company recorded royalty expenses of approximately \$474,000 and \$440,000, respectively. These expenses are included in selling, general and administrative expenses in the consolidated statements of operations and comprehensive loss.

On August 1, 2022, the Company entered into the Marketing Agreement with Fresenius, which expands the Company's strategic partnership with Fresenius by establishing a multi-stage global collaboration to combat life-threatening diseases in critical care. The Marketing Agreement has an initial term of three years, with an automatic renewal for an additional two years at the end of such initial term, subject to earlier termination by either of the parties (the "Term"). To help support the increased marketing and promotional efforts of the expanded collaboration, CytoSorbents has agreed to subsidize a portion of the marketing costs through a royalty payment to Fresenius Medical Care based on CytoSorb sales in the intensive care unit on Fresenius Medical Care platforms, excluding the United States. To help support the increased marketing and promotional efforts of the expanded collaboration, the Company has agreed to subsidize a portion of the marketing costs through royalty payments to Fresenius. Initially, the Marketing Agreement provides for royalty payments equal to 0.9% of the Company's net sales of CytoSorb products made during the Term (excluding net sales in the United States). This initial royalty rate was determined based on certain assumptions regarding the percentage of the Company's sale of CytoSorb products that are used with the Fresenius critical care platforms in the intensive care unit outside of the United States but is subject to adjustment if the Company determines that the underlying assumptions have changed significantly. For the three and six months ended June 30, 2023, the Company did not record any expense related to this agreement as Fresenius did not commence any marketing activities as defined by the agreement.

### **License Agreement**

In an agreement dated September 1, 2006, the Company entered into a license agreement which provides the Company the exclusive right to use its patented technology and proprietary know how relating to adsorbent polymers for a period of 18 years. Under the terms of the agreement, the Company has agreed to pay license fees of 2.5% to 5% on the sale of certain of its products if and when those products are sold commercially for a term not greater than 18 years commencing with the first sale of such product. For the three months ended June 30, 2023 and 2022 pursuant to the terms of the license agreement, the Company recorded licensing expenses of approximately \$320,000 and \$347,000, respectively. For the six months ended June 30, 2023 and 2022 pursuant to the terms of the license agreement, the Company recorded licensing expenses of approximately \$632,000 and \$734,000, respectively. These expenses are included in selling, general and administrative expenses in the consolidated statements of operations and comprehensive loss.

## 7. LEASES

The Company leases its operating facilities in both the United States and Germany under operating lease agreements. In March 2021, CytoSorbents Medical Inc. entered into a lease agreement for a new operating facility at 305 College Road East, Princeton, New Jersey, which contains office, laboratory, manufacturing and warehouse space. The lease commenced on June 1, 2021. The Early Term commenced on June 1, 2021 and lasted until September 30, 2021. The lease also contains two five-year renewal options; however, the Company has determined that it is not likely that they will exercise these options. Commencing on September 30, 2021, the remaining lease term will last for 15.5 years. The lease requires monthly rental payments of \$25,208 for the Initial Early Term, \$88,254 for the Early Term and initial monthly payments of approximately \$111,171 in the first year of the remaining term. Following the first year of the remaining term, the annual base rent will increase by approximately 2.75% annually over the remaining term. The lease also contains six months of rent abatement (months 1, 2, 3, 25, 26 and 27 of the remaining lease term). In addition to the base rent, payments of operating expenses and real estate taxes will be required. These payments are to be based on actual amounts incurred during 2021 multiplied by the Company's share of the total building space (92.3%). The landlord will also provide an allowance of approximately \$1,455,000 related to certain building improvements as outlined in the lease. In April 2021, the Company provided the landlord with a letter of credit in the amount of approximately \$1,467,000 as security. The Company has determined that this lease should be treated as an operating lease in accordance with the provisions of Accounting Standards Codification ("ASC") 842. On April 1, 2021, the Company recorded a Right-of-Use asset and related lease liability of approximately \$11.6 million, which represents the estimated present value of the lease payments at the commencement date discounted at the Company's incremental borrowing rate of 9.8%. In addition, due to the six months of rent abatement and annual base rent escalations during the remaining lease term that commenced on September 30, 2021, the Company will recognize rent expense on this lease on a straight-line basis over the remaining term of the lease for the difference between the rent expense recognized and the required payments under the lease.

In September 2021, the Company extended its two operating leases for its office facility in Germany. These leases require combined base rent payments amounting to approximately \$12,100 per month. The initial lease term of both leases ends August 31, 2026. In addition, the Company is obligated to monthly operating expenses of approximately \$3,000 per month. Both leases have a five-year option to renew that would extend the lease term to August 31, 2031. There are no provisions in the leases to increase the base rent during the renewal period. There were no lease incentives and no initial direct costs were incurred related to these leases.

In January 2021, CytoSorbents Europe GmbH entered into a lease for 1,068 square meters of additional warehouse space. The lease commenced on April 1, 2021 and requires monthly payments of base rent of \$7,784 and other costs of approximately \$239 and has a term of five years. The lease also has an option to extend the lease term for an additional five-year period through March 31, 2031. The Company has determined that this lease should be treated as an operating lease in accordance with the provisions of ASC 842. On April 1, 2020, the Company recorded a Right-of-Use asset and related lease liability at the estimated present value of the lease payments at the commencement date of approximately \$594,000.

### Right-Of-Use Asset and Lease Liability

The Company's consolidated balance sheets reflect the value of the right-of-use asset and related lease liability. This value was calculated based on the present value of the remaining base rent lease payments. The remaining lease payments include the renewal periods for both facilities as the Company has determined that it is probable that the renewal options will be exercised under each of the lease agreements. The discount rate used was the Company's incremental borrowing rate, which is 9.8%, as the Company could not determine the rate implicit in the lease. As a result, the value of the right-of-use asset and related lease liability is as follows:

	June 30, 2023	December 31, 2022
Right-of-use asset	\$ 12,333,970	\$ 12,603,901
Total lease liability	\$ 13,091,894	\$ 13,250,944
Less current portion	(114,382)	(108,939)
Lease liability, net of current portion	\$ 12,977,512	\$ 13,142,005

The maturities of the lease liabilities are as follows for the periods ending June 30:

2024	\$ 1,285,373
2025	1,676,044
2026	1,715,575
2027	1,756,193
2028	1,797,927
Thereafter	16,328,084
Total lease payments	24,559,196
Present value discount	(11,467,302)
Total	<u>\$ 13,091,894</u>

For the three months ended June 30, 2023 and 2022, operating cash flows paid in connection with operating leases amounted to approximately \$466,000 and \$685,000, respectively, and \$1,099,000 and \$1,398,000, respectively, for the six months ended June 30, 2023 and 2022, respectively.

As of June 30, 2023 and December 31, 2022, the weighted average remaining lease term was years 13.4 and 13.1 years, respectively.

## 8. NET LOSS PER SHARE

Basic loss per share and diluted loss per share for the three months ended June 30, 2023 and 2022 have been computed by dividing the net loss for each respective period by the weighted average number of shares outstanding during that period.

All outstanding options and restricted stock awards representing approximately 11,904,000 and 8,630,000 incremental shares at June 30, 2023 and 2022, respectively, have been excluded from the computation of diluted loss per share as they are anti-dilutive.

## 9. SUBSEQUENT EVENTS

On July 19, 2023, the Company announced the appointment of Alexander D’Amico as Chief Financial Officer effective August 7, 2023. The Company entered into an executive employment agreement with Mr. D’Amico with an initial term commencing on August 7, 2023 and expiring on December 31, 2025. After the expiration of the initial term, this employment agreement will automatically renew for additional terms of one year unless either party provides written notice of non-renewal at least 60 days prior to a renewal. This agreement provides for base salary and other customary benefits which include participation in group insurance plans, paid time off and reimbursement of certain business-related expenses, including travel and continuing educational expenses, as well as bonus and/or equity awards at the discretion of the Board of Directors. In addition, the agreements provide for certain termination benefits in the event of termination without “Cause” or voluntary termination of employment for “Good Reason”, as defined in the agreement. The agreements also provide for certain benefits in the event of a “Change of Control” of the Company, as defined in the agreement.

On July 7, 2023, the Board of Directors granted options to purchase 1,138,750 shares of common stock to the Company’s employees which will be awarded based upon each employee’s 2023 individual performance evaluation. Once awarded, these options will vest one half on the first anniversary of the grant date, one quarter on the second anniversary of the grant date, and one quarter on the third anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$2,811,000.

On July 7, 2023, the Board of Directors granted options to purchase 76,130 shares of common stock to certain of the Company’s employees. These options will vest in full on the first anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$172,000.

On July 7, 2023, the Board of Directors granted options to purchase 100,000 shares of common stock to members of the Company’s Board of Directors. These options will vest in full on the first anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$226,000.

On July 7, 2023, the Board of Directors granted options to purchase 20,000 shares of common stock to a named executive officer of the Company. These options will vest in full on the first anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$45,000.



On July 7, 2023, the Board of Directors granted options to purchase 424,000 shares of common stock to certain senior managers of the Company. These options will vest one half on the first anniversary of the grant date, one quarter on second anniversary of the grant date, one quarter on third anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$1,019,000.

On July 7, 2023, the Board of Directors granted options to purchase 182,000 shares of common stock to the named executive officers and certain senior managers of the Company. These options were awarded as a one-time award to each executive officer or senior manager in order to account for lost wages resulting from the salary freezes implemented by the Company over the preceding two years and to account for recent inflation. These options will vest one half on the first anniversary of the grant date, one half on second anniversary of the grant date. The grant date fair value of these unvested options amounted to approximately \$424,000.

On July 7, 2023, certain named executive officers and senior managers were granted 250,000 restricted stock units. These awards were valued at approximately \$883,000 at the date of issuance, based upon the market price of the Company's common stock at the date of the grant. These awards vest two thirds on the first anniversary of the date of the grant, and one-third on the second anniversary of the date of the grant.

On July 7, 2023, the Board of Directors granted options to purchase 115,000 shares of common stock to a certain senior manager of the Company. These options will only vest upon the achievement of certain specific, predetermined milestones related to the Company's long-term performance goals. The grant date fair value of these unvested options amounted to approximately \$276,000.

On July 7, 2023, the Board of Directors granted 61,500 restricted stock units to certain employees of the Company. These restricted stock units will only vest upon a Change in Control of the Company, as defined in the Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan.

On July 10, 2023, in connection with his appointment as Chief Financial Officer, Mr. D'Amico was awarded options to purchase 70,000 shares of common stock which will vest as follows: 25,000 options upon the six-month anniversary of the date of grant and 15,000 options upon each of the first, second and third anniversaries of the date of grant. The grant date fair value of these unvested options amount to approximately \$166,000. Additionally, on July 10, 2023, Mr. D'Amico was awarded 45,000 restricted stock units which will vest one half on the first anniversary of the grant date and one half on the second anniversary of the grant date. These restricted stock units were valued at approximately \$157,000 at the date of issuance, based upon the market price of the Company's common stock at the date of the grant. Additionally, on July 10, 2023, Mr. D'Amico was awarded 215,000 restricted stock units which will only vest upon a Change in Control of the Company, as defined in the Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan. Additionally, on July 10, 2023, Mr. D'Amico was awarded options to purchase 150,000 shares of common stock which will vest only upon the achievement of certain milestones pursuant to the terms of the Company's existing 2022-2025 performance pool in place for the Company's management team. Additionally, on July 10, 2023, Mr. D'Amico was awarded 15,000 restricted stock units which will vest either upon a Change of Control or will cliff vest on the second anniversary of the date of grant, subject to the executive officer's continued service with the Company as of the applicable vesting date.

Except for the option to purchase 70,000 shares of common stock and option to purchase 150,000 shares of common stock, in each case awarded to Mr. D'Amico, as further described above, each of the equity grants listed above were awarded on a contingent basis. Pursuant to this contingent award structure, the awards will be subject to cash settlement unless prior to the settlement date, the Company has received prior stockholder approval of an amendment to the Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan to increase the number of shares of the Company's common stock available for issuance pursuant to awards granted thereunder and such increase is, at a minimum, sufficient to permit the non-cash settlement of the contingent awards.

The Company is expected to settle a litigation matter. See Note 6, Litigation, for details regarding this expected settlement.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

### Cautionary Notes Regarding Forward Looking Statements

*This Quarterly report on Form 10-Q includes "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements about our plans, objectives, representations and contentions and our expectations of the effects of the COVID-19 pandemic and are not historical facts and typically are identified by use of terms such as "may," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," "continue" and similar words, although some forward-looking statements are expressed differently. You should be aware that the forward-looking statements included herein represent management's current judgment and expectations, but our actual results, events and performance could differ materially from those in the forward-looking statements.*

*Factors which could cause or contribute to such differences include, but are not limited to, the risks discussed in our Annual Report on Form 10-K, as updated by any risks reported in our Quarterly Reports on Form 10-Q and in the press releases and other communications to stockholders issued by us from time to time which attempt to advise interested parties of the risks and factors which may affect our business. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, other than as required under the Federal securities laws.*

### Overview

This discussion of our financial condition and the results of operations should be read together with the financial statements, including the notes contained elsewhere in this Quarterly Report on Form 10-Q, and the financial statements, including the notes thereto, contained in our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 9, 2023.

We are a leader in the treatment of life-threatening conditions in the intensive care ("ICU") and cardiac surgery using blood purification via our proprietary polymer adsorption technology. We have a number of products commercialized and in development based on this technology platform. Our flagship product, CytoSorb®, is already commercialized, and is being used to reduce deadly uncontrolled inflammation and dangerous substances in hospitalized patients around the world, with the goal of preventing or treating multiple organ failure, bleeding, and other potentially fatal complications. Organ failure is the cause of nearly half of all deaths in the ICU, with little to improve clinical outcome. CytoSorb is approved in the European Union ("EU") as an effective extracorporeal cytokine absorber, designed to reduce the "cytokine storm" or "cytokine release syndrome" that could otherwise cause massive inflammation, organ failure and death in common critical illnesses such as sepsis, burn injury, trauma, lung injury, liver failure, cytokine release syndrome due to cancer immunotherapy, and pancreatitis. These are conditions where the mortality is extremely high, yet few to no effective treatments exist. In May 2018, we received a label expansion for CytoSorb covering use of the device for the removal of bilirubin and myoglobin in the treatment of liver disease and trauma, respectively. In January 2020, we received CE-Mark label expansion for CytoSorb covering the use of the device for the removal of the anti-platelet agent, ticagrelor, in patients undergoing surgery requiring cardiopulmonary bypass. In April 2020, the United States Food and Drug Administration (the "FDA") granted Breakthrough Device Designation to CytoSorb for the removal of ticagrelor in a cardiopulmonary bypass circuit during emergent and urgent cardiothoracic surgery. In April 2020, we announced that the U.S. FDA has granted U.S. Emergency Use Authorization ("EUA") of CytoSorb for use in critically ill patients with COVID-19 infection and respiratory failure. In May 2020, we received a CE-Mark label expansion for CytoSorb for the removal of rivaroxaban during cardiothoracic surgery requiring cardiopulmonary bypass. In August 2021, the Company announced that it was granted a second Breakthrough Device Designation for its DrugSorb-ATR Antithrombotic Removal System by the FDA to remove the direct oral anticoagulants, rivaroxaban and apixaban. The Company has initiated a pivotal randomized, controlled clinical trial in the U.S. and Canada, called the STAR-T trial, evaluating the use of DrugSorb-ATR during cardiothoracic surgery to remove ticagrelor to prevent or reduce perioperative bleeding complications in pursuit of U.S. FDA and Health Canada marketing approval. In July 2023, the Company announced that enrollment in the STAR-T trial has been completed.

CytoSorb is used during and after cardiac surgery to remove inflammatory mediators, such as cytokines, activated complement, and free hemoglobin that can lead to post-operative complications such as acute kidney injury, lung injury, and shock. We believe CytoSorb has the potential to be used in many other inflammatory conditions, including the treatment of autoimmune disease flares, cytokine release syndrome in cancer immunotherapy, and other applications in cancer, such as cancer cachexia. CytoSorb has been used globally in more than 212,000 human treatments to date in critical illnesses and in cardiac surgery. CytoSorb has received CE-Mark label expansions for the removal of bilirubin (liver disease), myoglobin (trauma) and both ticagrelor and rivaroxaban during cardiothoracic surgery. CytoSorb has also received FDA Emergency Use Authorization in the United States for use in critically ill COVID-19 patients with imminent or confirmed respiratory failure, in defined circumstances. The EUA will be effective until a declaration is made that the circumstances justifying the EUA have terminated or until revoked by the FDA. CytoSorb has been used globally in more than 7,650 COVID-19 patients to date. DrugSorb-ATR has been granted FDA Breakthrough Designation for the removal of ticagrelor in a cardiopulmonary bypass circuit during emergent and urgent cardiothoracic surgery. DrugSorb-ATR was also granted a second FDA Breakthrough Device designation for the removal of the Direct Oral Anticoagulants (DOACs) apixaban and rivaroxaban in a cardiopulmonary bypass circuit to reduce the likelihood of serious perioperative bleeding during urgent cardiothoracic surgery.

We are focusing on three key objectives that we believe are the key to driving sustainable, long-term growth:

- Open the U.S. market by obtaining FDA Marketing approval for DrugSorb™-ATR to remove blood thinning drugs during cardiothoracic surgery (see Clinical Studies Update)
- Grow core CytoSorb sales to profitability, driven by numerous internal initiatives (see Sales and Marketing Update)
- Reduce cash burn and maintain tight control over expenses.

Our purification technologies are based on biocompatible, highly porous polymer beads that can actively remove toxic substances from blood and other bodily fluids by pore capture and surface adsorption. The technology is protected by 21 issued U.S. patents and multiple international patents, with applications pending both in the U.S. and internationally. We have numerous other product candidates under development based upon this unique blood purification technology, including CytoSorb XL, K\*ontrol, HemoDefend-RBC, HemoDefend-BGA, ContrastSorb, DrugSorb, DrugSorb-ATR and others.

Our proprietary polymer technologies form the basis of a broad technology portfolio. Some of our products and product candidates include:

- CytoSorb — an extracorporeal hemoperfusion cartridge approved in the EU for cytokine removal, with the goal of reducing SIRS and sepsis and preventing or treating organ failure.
- DrugSorb-ATR — an investigational extracorporeal antithrombotic removal system based on the same polymer technology as CytoSorb that is being evaluated in the U.S. STAR-T and STAR-D pivotal randomized, controlled trials to reduce the level of antithrombotic drugs, ticagrelor, apixaban and rivaroxaban to reduce bleeding complications in patients undergoing cardiothoracic surgery while on these drugs.
- ECOS-300CY — an adsorption cartridge approved in the E.U. for use with *ex vivo* organ perfusion systems to remove cytokines and other inflammatory mediators in the organ perfusate, with the goal of maintaining or improving solid organ function. prior to transplant. In 2021, commercialization of PerSorb™ and Aferetica's PerLife™ *ex vivo* organ perfusion system commenced in Italy.
- CytoSorb XL — an intended next generation successor to CytoSorb currently in advanced pre-clinical testing designed to reduce a broad range of cytokines and inflammatory mediators, including lipopolysaccharide endotoxin, from blood.
- VetResQ — a broad spectrum blood purification adsorber designed to help treat deadly inflammation and toxic injury in animals with critical illnesses such as septic shock, toxic shock syndrome, severe systemic inflammation, toxin-mediated diseases, pancreatitis, trauma, liver failure, and drug intoxication. VetResQ is being commercialized in the United States.
- HemoDefend-RBC—a development-stage blood purification technology designed to remove non-infectious contaminants in blood transfusion products, with the goal of reducing transfusion reactions and improving the quality and safety of blood.

- HemoDefend-BGA—a development-stage purification technology that can remove anti-A and anti-B antibodies from plasma and whole blood, to enable “universal plasma,” and safer whole blood transfusions, respectively.
- K<sup>+</sup>ontrol—a development-stage blood purification technology designed to reduce excessive levels of potassium in the blood that can be fatal in severe hyperkalemia.
- ContrastSorb—a development-stage extracorporeal hemoperfusion cartridge designed to remove IV contrast from the blood of high-risk patients undergoing radiological imaging with contrast, or interventional radiology procedures such as cardiac catheterization and angioplasty. The goal of ContrastSorb is to prevent contrast-induced nephropathy.
- DrugSorb—a development-stage extracorporeal hemoperfusion cartridge designed to remove toxic chemicals from the blood (e.g., drug overdose, high dose regional chemotherapy).
- BetaSorb—a development-stage extracorporeal hemoperfusion cartridge designed to remove mid-molecular weight toxins, such as b2-microglobulin, that standard high-flux dialysis cannot remove effectively. The goal of BetaSorb is to improve the efficacy of dialysis or hemofiltration.

### Clinical Studies Update

For a complete discussion regarding our clinical study history, please refer to the section entitled Clinical Studies included in Item 1 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the SEC on March 9, 2023. The following includes certain updates regarding these clinical studies subsequent to the filing of the Company’s Annual Report on Form 10-K:

In July 2021, we received full FDA approval of an Investigational Device Exemption (IDE) application to conduct a double-blind, randomized, controlled clinical study in 120 patients entitled, “Safe and Timely Antithrombotic Removal – Ticagrelor (**STAR-T**),” in the United States to support FDA marketing approval. This was done under the previously announced FDA Breakthrough Device Designation granted for the removal of ticagrelor in a cardiopulmonary bypass circuit to reduce the likelihood of serious perioperative bleeding during urgent cardiac surgery. In October 2021, the first patient was enrolled, and in November 2022 the first milestone was completed with the first one-third of patients enrolled, triggering the first independent Data Safety Monitoring Board (DSMB) meeting. The DSMB recommended continuing the study as planned without any modifications. In 2022, we also received FDA approval to expand the study to Canada and subsequently received Health Canada approval allowing inclusion of Canadian sites into the STAR-T trial in January 2023. In April 2023, the study reached the 2<sup>nd</sup> milestone of 67% enrollment or 80 patients triggering the second independent DSMB meeting. The DSMB again recommended continuing the study as planned without any modifications. The STAR-T study completed enrollment in July 2023. Operational activities are now focused on collection and cleaning of data leading to database lock in order to perform analyses and generate the results of the study.

In October 2021, we also received full FDA approval of an Investigational Device Exemption (IDE) application to conduct a double-blind, randomized, controlled clinical study for up to 120 patients entitled, “Safe and Timely Antithrombotic Removal – Direct Oral Anticoagulants (**STAR-D**),” in the United States to support FDA marketing approval. This was done under the previously announced 2<sup>nd</sup> FDA Breakthrough Device Designation granted for our DrugSorb-ATR Antithrombotic Removal System. This Breakthrough Device designation covers the removal of the Direct Oral Anticoagulants (DOACs) apixaban and rivaroxaban in a cardiopulmonary bypass circuit to reduce the likelihood of serious perioperative bleeding during urgent cardiac surgery. Study enrollment was paused in November of 2022 for business reasons and is scheduled to resume after completion of the STAR-T trial.

In January 2020, CytoSorb received European Union CE Mark label expansion to include the removal of ticagrelor during cardiopulmonary bypass in patients undergoing cardiothoracic surgery. In May 2020, CytoSorb also received European Union CE Mark label expansion to include rivaroxaban removal for the same indication. The international Safe and Timely Antithrombotic Removal (**STAR**) Registry is designed to capture real world clinical and health economic outcomes with intraoperative antithrombotic drug removal. The Registry is actively recruiting in the U.K., Germany, Austria, Sweden and Belgium and is planned to expand to additional countries in 2023. Data outputs from the STAR Registry have already been reported at the EuroPCR 2023 conference in Paris in May 2023 with additional data planned for release at the European Association of Cardiothoracic Surgery conference in Vienna in October 2023. The Registry will continue to report analyses at international conferences and submit the results for publication on a rolling basis as enrollment progresses.

In April 2020, we received U.S. FDA Emergency Use Authorization for the treatment of adult critically ill COVID-19 patients with confirmed or imminent respiratory failure. The U.S. CytoSorb Therapy in COVID-19 (CTC) Registry was launched to capture outcomes and device utilization patterns from multiple U.S. participating centers. Initial results on critically ill COVID-19 patients on extracorporeal membrane oxygenation (ECMO) treated with CytoSorb at participating U.S. centers showed high survival rates (73%) compared with the international benchmark Extracorporeal Life Support Organization (ELSO) Registry. The initial CTC results on the first 52 critically ill patients from five U.S. ECMO centers were presented at the International Symposium of Intensive Care Medicine conference in August 2021 in Brussels, Belgium, and published in the peer reviewed journal *Frontiers in Medicine*. The CTC registry completed enrollment with 100 patients from five centers, and the final results mirror the high survival (74%) seen in the previous analysis and were recently published in the prestigious journal *Critical Care*.

The German PROCYSS multicenter, randomized controlled trial evaluating the ability of CytoSorb to restore hemodynamic stability in patients with refractory septic shock is actively enrolling. The speed of enrollment remains uncertain due to COVID-19 related institutional research staff shortages. We are evaluating options to improve enrollment, including a study protocol amendment for potential study design optimization.

The international COSMOS Registry was designed to capture real world outcomes and device utilization patterns across multiple critical care indications including but not limited to sepsis, acute respiratory failure, postoperative vasoplegia, acute liver failure, and acute pancreatitis. The Registry is actively enrolling in Spain, Germany and Italy with plans to expand in more countries in 2023. The intent of the Registry is to report outcomes at international conferences and submit the results for publication on a rolling basis as enrollment progresses.

### Sales and Marketing Update

The following are the key initiatives that we have been executing upon to drive product sales growth in the future.

#### Near-term growth drivers

- *Resume In-person Sales from a Strong Customer Base:* Our core customer base accounts for the majority of our direct sales and grew by 20-25% at the start of the pandemic and has remained stable since. Although the acute care hospital market is still suffering from staffing shortages, decreased procedural revenues, and strained budgets in the aftermath of the COVID pandemic, we are experiencing significantly improving numbers of in-person meetings with customers at hospitals and at scientific conferences which we believe are critical to effective sales, as hospital visiting restrictions have generally been lifted, though some restrictions still remain in certain areas.
- *New Therapy Divisions:* We have established three distinct therapy divisions within our commercial operations including Critical Care, Cardiovascular, and Liver/Kidney/other to develop these markets internationally with the focus of leaders with area-specific medical and commercial expertise, who will work closely with our sales teams and best serve the needs and interests of our customers. We have already seen our efforts bear fruit with increasing numbers of cardiac surgery centers internationally who have begun to use CytoSorb to remove antithrombotic drugs during urgent cardiac surgery, for example. We believe this infrastructure will yield many more similar successes across a broad array of applications.
- *New Exclusive Private Hospital Chain Partnerships:* We are now the preferred supplier of hemoadsorption technology to the three largest private hospital chains in Germany, including Asklepios Kliniken GmbH, Helios, and the former hospitals of RHÖN-KLINIKUM AG. Many of these hospitals are already current customers and our agreements facilitate access and sales of CytoSorb to these and all other relevant institutions within these hospital networks.

- *Rise of Existing and New Applications:* Among the many applications, we highlight:
  - *Shock:* Many studies have highlighted the ability of CytoSorb to remove inflammatory mediators and help to stabilize shock, a potentially fatal drop in blood pressure, in a wide range of patients. A recent 2019 meta-analysis, found that approximately 10% of ICU patients have septic shock at admission and 8% of patients admitted to the ICU have septic shock at some point in their hospital stay, with a high mortality of 38%. CytoSorb is being used around the world as a treatment of shock and we are conducting the PROCYSS RCT to formally evaluate CytoSorb as a treatment of this common and major unmet medical need.
  - *Liver disease:* In the treatment of acute liver disease, CytoSorb outperforms the market leading MARS® platform (Baxter) in the *ex vivo* removal of many liver toxins, but has the added benefit of removing cytokines and inflammatory mediators, which MARS does not do, while being much easier to use. In real-world practice, CytoSorb has replaced MARS at many accounts.
  - *Lung Injury:* Our U.S. CTC registry highlights the high survival of critically ill COVID-19 patients with acute respiratory distress syndrome (ARDS) treated with CytoSorb and ECMO under FDA Emergency Use Authorization. We believe these data demonstrate a therapeutic strategy of “enhanced lung rest” using the combined therapies that can be extrapolated to the treatment of ARDS in non-COVID patients, a very large market.

#### Longer-term growth drivers

- *Stand-alone blood pump strategy:* There are many applications where a simple, low-cost hemoperfusion pump is adequate to implement our CytoSorb blood purification technology, without the complexity of a large dialysis or continuous renal replacement therapy (CRRT) machine, without the need for a dialysis technician, and where patients do not need to have failed kidneys. This would greatly simplify treatment with CytoSorb in the ICU - potentially enabling its *more* ubiquitous and earlier use on *more* patients while opening the door for *more* new applications in the emergency room, surgery suites, and elsewhere, in what we call the “hospital-wide” application. We have initially partnered with a major international dialysis company, Nikkiso, to distribute a high-quality hemoperfusion machine in Germany, Austria, and Luxembourg and are in the midst of a soft launch. The machine is only as good as the therapy that is being run on it, and CytoSorb is the market leading cytokine adsorbing technology that makes this an excellent combination treatment and a potentially game-changing new business model going forward.
- *Expansion of direct sales territories:* Although opening new countries with a direct sales force requires time, cost, and effort, it also allows us to directly lead the effort, drive results, and benefit from more profitable sales. With the announcement of expansion of direct sales into the U.K., Ireland and France, we now sell direct in three of the E.U.’s Big 5 Economies – Germany, France and the U.K. – and a total of 15 countries direct overall, while working with distributors or partners in the other two Big 5 Economies: Italy, and Spain.
- *Investment in important clinical studies in shock, liver failure, cardiac surgery, ATR, etc:* We are committed to funding Company-sponsored studies in key areas that we believe will drive international adoption and usage, with the goal of becoming a standard of care for those applications.

#### COVID-19 Business Update

COVID-19 patients develop life-threatening complications such as acute respiratory distress syndrome (ARDS), shock (i.e. a potentially fatal drop in blood pressure), kidney failure, acute cardiac injury, thromboses and emboli, and secondary bacterial infections. The underlying cause for these complications is often a massive, systemic inflammatory response, leading to the damage of vital organs such as the lungs, heart, and kidneys, and ultimately multiple organ failure and death in many cases. Hypercoagulability, thought triggered by inflammation, and resulting thromboembolic events such as pulmonary emboli and thrombotic microangiopathy, play another critical role in the pathophysiology of COVID-19 infection and severity of illness.

The use of CytoSorb in patients infected with COVID-19 in Italy, China, Germany and France began in March 2020. During the pandemic, CytoSorb has been used to treat dangerous inflammation and related life-threatening complications in more than 7,650

COVID-19 patients in more than 30 countries. Based upon initial data and reports from physicians treating these complications, CytoSorb use has generally been associated with a marked reduction in cytokine storm and inflammation, improved lung function, weaning from mechanical ventilation, decannulation from extracorporeal membrane oxygenation (ECMO), and a reversal of shock.

The use of CytoSorb has not been approved in the U.S. by the FDA. However, under certain circumstances, investigational medical devices that have not yet been FDA-approved may be made available for emergency use in the U.S. under the FDA's Expanded Access Program ("EAP"). On April 13, 2020, we announced that the FDA, in a different program than the EAP, granted U.S. Emergency Use Authorization (EUA) of CytoSorb for use in adult critically ill COVID-19 patients. Under the EUA, CytoSorbents was able to make CytoSorb available, through commercial sales, to all hospitals in the U.S. for use in patients, 18 years of age or older, with confirmed COVID-19 infection who are admitted to the intensive care unit with confirmed or imminent respiratory failure and who have early acute lung injury or ARDS, severe disease, or life-threatening illness resulting in respiratory failure, septic shock, and/or multiple organ dysfunction or failure. The CytoSorb device has been authorized by FDA under an EUA. It has neither been cleared nor approved for the indication to treat patients with COVID-19 infection. The EUA will be effective until a declaration is made that the circumstances justifying the EUA have terminated or until revoked by the FDA.

The U.S. CTC (CytoSorb Therapy in COVID-19) Registry was launched to capture outcomes and device utilization patterns from multiple U.S. participating centers. Primary results on observed ICU mortality of COVID-19 patients with acute respiratory distress syndrome (ARDS) requiring extracorporeal membrane oxygenation (ECMO) and treated with CytoSorb according to FDA EUA criteria were presented at the International Symposium of Intensive Care Medicine conference in September 2021 in Brussels, Belgium. In December 2021, we announced the publication of results on the first 52 patients in the peer-reviewed journal *Frontiers in Medicine*, demonstrating high 90-day survival (73%). The CTC Registry has completed enrollment at 100 patients and 5 U.S. ECMO centers, confirming high 90-day survival (74%). The final results of the CTC Registry with 100 patients, and a discussion of "enhanced lung rest" due to the combination therapy of CytoSorb with ECMO, were published recently in the journal, *Critical Care*.

#### **Government Research Grants:**

We have historically been successful in obtaining technology development contracts from governmental agencies such as the National Institutes of Health and the U.S. Department of Defense, including the Defense Advanced Research Projects Agency ("DARPA"), the U.S. Army, U.S. Special Operations Command ("USSOCOM"), the U.S. Air Force, Air Force Material Command ("USAF/AFMC") and others. Currently, we have ongoing projects funded, in part, by the U.S. Army Medical Research Acquisition Activity ("USAMRAA"), the NHLBI, and the USAF/AFMC. For a complete discussion of the various research grants we have obtained, please refer to the section entitled Government Research Grants included in Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 9, 2023. The following additional research grant has been awarded subsequent to the filing of our Annual Report on Form 10-K:

On May 12, 2023, the Company was granted a Phase I Small Business Innovation Research (SBIR) award from the United States Department of the Air Force (DAF) valued at \$74,918 to explore new ways to treat combat injuries. As of June 30, 2023, we have earned \$24,600 in funding under the contract and have approximately \$50,300 remaining under the contract.

#### **Research and Development Update**

Our research and development work levels have returned back to pre-pandemic levels. The hiring of key technical staff remains a challenge in the current economic environment. Our recruiting process is ongoing, so that we can obtain the technical staff required to be able to timely execute on our various grant and non-grant related research and development projects. As of June 30, 2023, the revenue remaining to be earned on open grant contracts is \$8.7 million. Overall, grant funded programs, HemoDefend-BGA™ (Universal Plasma), HemoDefend-RBC™ and K<sup>+</sup>ontrol™, continue to progress and we have been the beneficiary of approximately \$15.8 million, \$4.7 million and \$7.7 million in total funding, respectively, awarded to date.



**Impact of Inflation and Other Issues:**

The current high inflationary environment has impacted us in various ways. Due to the current competitive labor market and rising inflation, our labor costs have risen significantly in order to attract and retain qualified employees throughout our organization. In addition, we have experienced raw material price increases primarily related to the oil-based chemicals used in the polymer manufacturing process as well as additional requests for higher fuel surcharges from most suppliers. Rising energy costs, including electricity and fossil fuels, have also made it more expensive to support our operations, manufacturing, and commercial activities. We have also experienced increases in our transportation costs; however, we have been able to substantially mitigate these cost increases by implementing bulk shipping methods. In addition, we have been able to mitigate most supply chain issues that existed during the COVID-19 pandemic by ordering larger quantities of inventory as they were available. Inflationary pressures may continue to impact our product gross margins in the future.

***Comparison for the three months ended June 30, 2023 and 2022:***

***Revenues:***

Revenue from product sales was approximately \$8,072,000 in the three months ended June 30, 2023, as compared to approximately \$7,331,000 in the three months ended June 30, 2022, an increase of approximately \$741,000, or 10%. Direct sales increased approximately \$331,000, or 8%. Distributor sales increased approximately \$410,000, or 14%. The increase in the average exchange rate of the Euro to the U.S. dollar positively impacted second quarter 2023 product sales by approximately \$187,000. For the three months ended June 30, 2023, the average exchange rate of the Euro to the U.S. dollar was \$1.09 as compared to an average exchange rate of \$1.06 for the three months ended June 30, 2022. There were no sales related to the demand for CytoSorb to treat COVID-19 patients during the three months ended June 30, 2023 or for the three months ended June 30, 2022.

Grant income was approximately \$1,348,000 for the three months ended June 30, 2023 as compared to approximately \$1,165,000 for the three months ended June 30, 2022, an increase of approximately \$183,000, or 16%. This increase was a result of a strategic decision to deploy our research and development employees exclusively to grant related activities during the three months ended June 30, 2023.

Total revenues were approximately \$9,421,000 for the three months ended June 30, 2023, as compared to total revenues of approximately \$8,496,000 for the three months ended June 30, 2022, an increase of approximately \$925,000, or 11%.

***Cost of Revenues:***

For the three months ended June 30, 2023 and 2022, cost of revenue was approximately \$3,402,000 and \$3,551,000, respectively, a decrease of approximately \$149,000. Product cost of revenue was approximately \$2,093,000 and \$2,453,000, respectively, for the three months ended June 30, 2023 and 2022, a decrease of approximately \$360,000. The decrease is due primarily to inefficiencies associated with the relocation of our production activities to our new manufacturing facility in Princeton, New Jersey during the second quarter of 2022 that did not recur in the second quarter of 2023. Product gross margins were approximately 74% for the three months ended June 30, 2023 as compared to approximately 67% for the three months ended June 30, 2022.

***Research and Development Expenses:***

For the three months ended June 30, 2023, research and development expenses were approximately \$3,669,000, as compared to research and development expenses of approximately \$4,183,000 for the three months ended June 30, 2022, a decrease of approximately \$514,000. This decrease was due to a decrease in our clinical trial activities of approximately \$627,000 related to the pause of our STAR-D trial in November 2022. This decrease was offset by approximately \$70,000 of costs incurred related to pre-production manufacturing activities required to bring the new manufacturing plant to a state of commercial readiness and an increase in non-grant related research and development costs of approximately \$43,000.

***Legal, Financial and Other Consulting Expenses:***

Legal, financial, and other consulting expenses were approximately \$1,185,000 for the three months ended June 30, 2023, as compared to approximately \$679,000 for the three months ended June 30, 2022, an increase of approximately \$506,000. This increase was due to an increase in legal fees and expected settlement costs of pending litigation of approximately \$306,000 (see Note 6), other increases in



legal expenses of approximately \$174,000 and the write-off of certain patent costs and an increase in accounting fees and other consulting fees of approximately \$26,000.

***Selling, General and Administrative Expenses:***

Selling, general and administrative expenses were approximately \$7,724,000 for the three months ended June 30, 2023, as compared to approximately \$8,439,000 for the three months ending June 30, 2022, a decrease of \$715,000. This decrease was due to a decrease in non-cash stock compensation expense of approximately \$191,000, a decrease in travel and entertainment expenses of approximately \$99,000, a decrease in public relations costs of approximately \$96,000, a decrease in advertising costs of approximately \$82,000, a decrease in royalty expense of approximately \$73,000, a decrease in commercial insurance of approximately \$56,000, a decrease in salaries, commissions and related costs of approximately \$43,000, and a decrease in other general and administrative expenses of approximately \$75,000.

***Gain (Loss) on Foreign Currency Transactions:***

For the three months ended June 30, 2023, the gain on foreign currency transactions was approximately \$415,000 as compared to a loss of approximately \$2,523,000 for the three months ended June 30, 2022. The 2023 gain was directly related to the increase in the spot exchange rate of the Euro to the U.S. dollar at June 30, 2023 as compared to March 31, 2023. The spot exchange rate of the Euro to the U.S. dollar was \$1.091 per Euro at June 30, 2023, as compared to \$1.086 per Euro at March 31, 2023. The 2022 loss was directly related to the decrease in the spot exchange rate of the Euro at June 30, 2022 as compared to March 31, 2022. The spot exchange rate of the Euro to the U.S. dollar was \$1.05 per Euro as of June 30, 2022, as compared to \$1.11 per Euro as of March 31, 2022.

***Comparison for the six months ended June 30, 2023 and 2022:***

***Revenues:***

Revenue from product sales was approximately \$15,982,000 for the six months ended June 30, 2023, as compared to approximately \$15,255,000 for the six months ended June 30, 2022, an increase of approximately \$727,000, or 5%. Distributor sales increased by approximately \$597,000, or 10%. Overall direct sales increased by approximately \$130,000, or 1%. The change in the exchange rate of the Euro to U.S. dollar did not have a significant impact on product sales during the six months ended June 30, 2023.

Grant income was approximately \$2,888,000 for the six months ended June 30, 2023 as compared to approximately \$1,932,000 for the six months ended June 30, 2022, an increase of approximately \$956,000 or 49%. During the six months ended June 30, 2022, our research and development employees were either deployed to work-from-home status or reassigned to assist in activities related to increasing the production of CytoSorb. In 2023, research and development employees were assigned exclusively to grant and other research and development activities.

Total revenues were approximately \$18,870,000 for the six months ended June 30, 2023, as compared to total revenues of approximately \$17,187,000 for the six months ended June 30, 2022, an increase of approximately \$1,683,000, or 10%.

***Cost of Revenues:***

For the six months ended June 30, 2023 and 2022, cost of revenue was approximately \$7,396,000 and \$5,828,000, respectively, an increase of approximately \$1,568,000. Product cost of revenue was approximately \$4,624,000 and \$4,008,000, respectively, for the six months ended June 30, 2023 and 2022, an increase of approximately \$616,000 and grant cost of revenue increased by approximately \$952,000. These increases were due primarily to an increases in both product sales and grant revenue. Product gross margins were approximately 71% for the six months ended June 30, 2023 and approximately 74% for the six months ended June 30, 2022. The reduction in product gross margin is due primarily to start-up costs associated with our new manufacturing facility in Princeton, New Jersey during the six months ended June 30, 2023.

***Research and Development Expenses:***

For the six months ended June 30, 2023, research and development expenses were approximately \$7,883,000 as compared to research and development expenses of approximately \$8,427,000 for the six months ended June 30, 2022, a decrease of approximately \$544,000.

This decrease was due to a decrease in costs associated with our clinical trial activities of approximately \$1,434,000 related to the pause of our STAR-D trial in November 2022, and a decrease in non-grant related research and development activities of approximately \$29,000. These decreases were offset by approximately \$919,000 of costs incurred related to pre-production manufacturing activities required to bring the new manufacturing plant to a state of commercial readiness.

***Legal, Financial and Other Consulting Expenses:***

Legal, financial, and other consulting expenses were approximately \$1,854,000 for the six months ended June 30, 2023, as compared to approximately \$1,480,000 for the six months ending June 30, 2022. The increase of approximately \$374,000 was due to an increase in legal fees and expected settlement costs of pending litigation of approximately \$306,000 (see Note 6) and an increase in employment agency fees of approximately \$80,000. These increases were offset by a decrease in consulting fees of approximately \$12,000.

***Selling, General and Administrative Expenses:***

Selling, general and administrative expenses were approximately \$16,187,000 for the six months ended June 30, 2023, as compared to \$17,600,000 for the six months ended June 30, 2022, a decrease of \$1,413,000. This decrease was due to a decrease in salaries, commissions and related costs of approximately \$683,000, a decrease in non-cash stock compensation expense of approximately \$148,000, a decrease in commercial insurance expenses of approximately \$131,000, a decrease in travel and entertainment expenses of approximately \$127,000, a decrease in public relations costs of approximately \$119,000, a decrease in advertising costs of approximately \$100,000, a decrease in royalty expense of approximately \$68,000 and a decrease in other general and administrative expenses of approximately \$37,000.

***Gain (Loss) on Foreign Currency Transactions:***

For the six months ended June 30, 2023, the gain on foreign currency transactions was approximately \$1,076,000 as compared to a loss of approximately \$3,736,000 for the six months ended June 30, 2022. The 2023 gain was directly related to the increase in the spot exchange rate of the Euro to the U.S. dollar as of June 30, 2023 as compared to December 31, 2022. The spot exchange rate of the Euro to the U.S. dollar was \$1.09 per Euro as of June 30, 2023, as compared to \$1.07 per Euro at December 31, 2022. The 2022 loss was directly related to the decrease in the spot exchange rate of the Euro as of June 30, 2022 as compared to December 31, 2021.

***History of Operating Losses:***

We have experienced substantial operating losses since inception. As of June 30, 2023, we had an accumulated deficit of approximately \$267,477,000, which included losses of approximately \$13,479,000 and \$19,846,000 for the six-month periods ended June 30, 2023 and 2022, respectively. Historically, losses have resulted principally from costs incurred in the research and development of our polymer technology, clinical studies, and general and administrative expenses.

***Liquidity and Capital Resources***

Since inception, our operations have been primarily financed through the issuance of debt and equity securities. As of June 30, 2023, we had current assets of approximately \$23,644,000 and current liabilities of approximately \$10,351,000. As of June 30, 2023, \$25 million of our total shelf amount was allocated to our ATM facility, of which approximately \$22.8 million is still available. In April of 2023, we received approximately \$1,000,000 in cash from the approved sale of our net operating losses and research and development credits from the State of New Jersey.

We are also managing our resources proactively, continuing to invest in key areas such as our U.S. pivotal STAR-T trial. We have instituted tight cost controls which are expected to materially reduce our planned cash burn in 2023.

We believe that we have sufficient cash to fund the Company's operations through 2023. We will need to raise additional capital to support our ongoing operations in the future.

## **COVID-19 Impact on Financial Results**

For the first year and a half of the coronavirus pandemic, COVID-19 was generally a positive driver for CytoSorb sales and highlighted the use of CytoSorb to treat cytokine storm and hyperinflammation. Because of this, the pandemic was a catalyst for CytoSorb orders from existing customers and also from new hospitals in countries where CytoSorb was not previously sold. We believe this awareness of CytoSorb increased overall usage during the COVID-19 pandemic and may help to drive further CytoSorb sales in the future.

However, starting in the third quarter of 2021, the protracted COVID-19 pandemic began to have a negative impact on our business, due to pandemic-driven adverse market conditions worldwide, especially in Germany which is our largest market. The excessive workload on healthcare workers due to COVID has led to an exodus of healthcare workers, particularly nurses, worldwide, leaving hospitals short-staffed. This in turn has forced the reduction in ICU beds and allowable patient censuses, and reduced the scheduling of revenue generating surgical procedures, resulting in decreased revenue and economic weakness at hospitals. Meanwhile, in 2022 the rates of severe COVID-19 illness requiring ICU care, and COVID-related death have been disproportionately very low. This is mainly attributed to high rates of vaccinations, natural immunity, and the availability of anti-viral drugs that are associated with reduced severity of illness, reduced need for hospitalization, and risk of death. These factors, in turn, have decreased the numbers of COVID-19 patients treatable with CytoSorb.

Additionally, prior to 2023, COVID had slowed our ability to generate clinical data to support our sales and marketing efforts. Currently, we are seeing an easing of the negative impacts of COVID-19. In 2023, we have regained access to hospitals and physicians which should positively impact our product sales in the future. The lessened impact of COVID-19 has also had a positive impact on patient enrollment of pivotal STAR-T clinical trial.

## **Contractual Obligations**

In March 2021, the Company entered into a lease agreement for a new operating facility at 305 College Road East, Princeton, New Jersey, which contains office, laboratory, manufacturing and warehouse space. The commencement date of the lease was April 1, 2021. The Initial Early Term began on the commencement date (April 1, 2021) and lasted two months. The Early Term commenced on June 1, 2021 and lasted until September 30, 2021. The lease also contains two five-year renewal options. Commencing on September 30, 2021, the remaining lease term will last for 15.5 years. The lease requires monthly rental payments of \$25,208 for the Initial Early Term, \$88,254 for the Early Term and initial monthly payments of approximately \$111,171 in the first year of the remaining term. Following the first year of the remaining term, the annual base rent will increase by approximately 2.75% annually over the remaining term. The lease also contains six months of rent abatement. In addition to the base rent, payments of operating expenses and real estate taxes will be required. These payments are to be based on actual amounts incurred during 2021, multiplied by the Company's share of the total building space (92.3%). The landlord also provided an allowance of approximately \$1,455,000 related to certain building improvements as outlined in the lease. In April 2021, the Company provided the landlord with a letter of credit in the amount of approximately \$1,334,000 as security.

In January 2021, CytoSorbents Europe GmbH entered into a lease for 1,068 square meters of additional warehouse space. The lease commenced on April 1, 2021, requires monthly payments of base rent of \$7,784 and other costs of approximately \$239 and has a term of five years. The lease also has an option to extend the lease term for an additional five-year period through March 31, 2031.

In September 2021, the Company extended its two operating leases for its office facility in Germany. These leases require combined base rent payments amounting to approximately \$12,100 per month. The initial lease term of both leases ends August 31, 2026. In addition, the Company is obligated to monthly operating expenses of approximately \$3,000 per month. Both leases have a five year option to renew that would extend the lease term to August 31, 2031.

## **Off-balance Sheet Arrangements**

We have no off-balance sheet arrangements.

## **Going Concern**

As of June 30, 2023, the Company's cash and cash equivalents were approximately \$13.2 million, and approximately \$1.7 million in restricted cash, which is not expected to fund the Company's operations beyond the new twelve months from the issuance of these

financial statements. This matter raises substantial doubt about the Company's ability to continue as a going concern. As a result, the accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company expects to raise additional capital in the future.

#### **Critical Accounting Policies and Estimates**

A discussion of our critical accounting policies and estimates is contained in our Annual Report on Form 10-K.

#### **Item 3. Quantitative and Qualitative Disclosures About Market Risk.**

Not applicable.

#### **Item 4. Controls and Procedures.**

We maintain disclosure controls and procedures designed to ensure information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to management, including our Chief Executive Officer and Interim Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Interim Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Interim Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report are functioning effectively to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Interim Chief Financial Officer, as appropriate to allow timely decisions regarding disclosures. A controls system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

No change in our internal control over financial reporting occurred during the three months ended June 30, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## **PART II. OTHER INFORMATION**

### **Item 1. Legal Proceedings.**

The Company is, from time to time, subject to claims and litigation arising in the ordinary course of business. The Company intends to defend vigorously against any future claims and litigation. The Company is expected to settle a litigation matter. As part of the expected settlement agreement, the Company estimates that it will be required pay a total of \$280,000 to settle this matter. in return for a release of all claims against the Company. This liability is included in accrued expenses and other current liabilities in the consolidated balance sheet as of June 30, 2023. The expense related to this settlement is included in legal financial and other consulting expenses on the consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2023.

The Company is not currently a party to any other legal proceedings.

### **Item 1A. Risk Factors.**

For a discussion of risks that affect the Company's business, please refer to Part I, Item 1A, "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 9, 2023, as supplemented by the following additional risk factor, which shall be deemed to replace, in its entirety, the risk factor in our Annual Report on Form 10-K entitled, "*We have a history of losses and expect to incur substantial future losses.*"

***We have a history of losses and expect to incur substantial future losses, and the report of our auditor on our consolidated financial statements expresses substantial doubt about our ability to continue as a going concern.***

We have experienced substantial operating losses since inception. As of June 30, 2023, we had an accumulated deficit of approximately \$267,477,000, which included net losses of approximately \$6,153,000 and \$10,879,000 for the three months ended June 30, 2023 and 2022, respectively, and included net losses of approximately \$13,479,000 and \$19,846,000 for the six months ended June 30, 2023 and 2022, respectively. Due in part to these losses, our audited consolidated financial statements have been prepared assuming we will continue as a going concern, and the auditors' report on those financial statements express substantial doubt about our ability to continue as a going concern. Our losses have resulted principally from costs incurred in the research and development of our polymer technology, clinical studies and general and administrative expenses. We intend to conduct significant additional research, development, and clinical study activities which, together with expenses incurred for the establishment of manufacturing arrangements and a marketing and distribution presence and other general and administrative expenses, are expected to result in continuing net losses for the foreseeable future. The amount of future losses and when, if ever, we will achieve profitability are uncertain. Our ability to achieve profitability will depend, among other things, on continued adoption and usage of our products in the market, obtaining additional regulatory approvals in markets not covered by the CE mark, establishing sales and marketing arrangements with third parties, satisfactory reimbursement in key territories, and raising sufficient funds to finance our activities. No assurance can be given that our product development efforts will be successful, that our current CE Mark will enable us to achieve profitability, that additional regulatory approvals in other countries will be obtained, that any of our products will be manufactured at a competitive cost and will be of acceptable quality, that reimbursement will be available or satisfactory, that we will be able to achieve profitability or that profitability, if achieved, can be sustained, or our ability to raise additional capital when needed or on terms acceptable to us. Our failure with respect to any or all of these matters would have a material adverse effect on our business, operating results, financial condition and prospects.

### **Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.**

None.

### **Item 3. Defaults Upon Senior Securities.**

None.

### **Item 4. Mine Safety Disclosures.**

Not applicable.

**Item 5. Other Information.**

None.

**Item 6. Exhibits.**

Number	Description
10.1	<a href="#">Seventh Amendment to the Amended and Restated Loan and Security Agreement, dated as of May 16, 2023, by and among CytoSorbents Corporation, CytoSorbents Medical, Inc. and Western Alliance Bank.</a>
31.1	<a href="#">Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of Sarbanes Oxley Act of 2002.</a>
31.2	<a href="#">Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of Sarbanes Oxley Act of 2002.</a>
32.1	<a href="#">Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes Oxley Act of 2002.*</a>
32.2	<a href="#">Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes Oxley Act of 2002.*</a>
101	The following materials from CytoSorbents Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets at June 30, 2023 and December 31, 2022, (ii) Consolidated Statements of Operations for the three and six months ended June 30, 2023 and 2022, (iii) Consolidated Statement of Changes in Stockholders' Equity for the three and six months ended June 30, 2023 and 2022, (iv) Consolidated Statements of Cash Flows for the six months ended June 30, 2023 and 2022 and (v) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

\* In accordance with SEC Release 33-8238, Exhibits 32.1 and 32.2 are being furnished and not filed.

\*\* Portions of this exhibit identified by [\*\*\*] have been excluded pursuant to Item 601(b)(10)(iv) of Regulation S-K because it is both not material and is private or confidential.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

**CYTOSORBENTS CORPORATION**

Dated: August 1, 2023

By: /s/ Phillip P. Chan

Name: Phillip P. Chan

Title: Interim Chief Executive Officer

(Principal Executive Officer)

Dated: August 1, 2023

By: /s/ Kathleen P. Bloch

Name: Kathleen P. Bloch, CPA

Title: Interim Chief Financial Officer

(Principal Financial and Accounting Officer)

## SEVENTH AMENDMENT TO THE AMENDED AND RESTATED LOAN AND SECURITY AGREEMENT

THIS SEVENTH AMENDMENT to the Amended and Restated Loan and Security Agreement (this “**Amendment**”) is made effective as of May 16, 2023 (the “**Seventh Amendment Date**”) and made by and among **WESTERN ALLIANCE BANK**, an Arizona corporation (“**Bank**”) and **CYTOSORBENTS CORPORATION**, a Delaware corporation and **CYTOSORBENTS MEDICAL, INC.**, a Delaware corporation (individually and collectively, jointly and severally “**Borrower**”).

WHEREAS, Bank and Borrower have entered into that certain Amended and Restated Loan and Security Agreement, dated as of March 29, 2018 (as amended, supplemented, restated or otherwise modified from time to time, the “**Loan Agreement**”) pursuant to which Bank has provided to Borrower certain loans in accordance with the terms and conditions thereof; and

WHEREAS, Bank and Borrower desire to amend certain provisions of the Loan Agreement as provided herein and subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the promises, covenants and agreements contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Bank and Borrower hereby agree as follows:

1. Capitalized terms used herein but not otherwise defined shall have the respective meanings given to them in the Loan Agreement.
2. Section 1.1 of the Loan Agreement is hereby amended by adding the following definition thereto in alphabetical order:

“Seventh Amendment Date” is May 16, 2023.

3. Section 6.3 of the Loan Agreement is hereby amended and restated in its entirety as follows:

**6.3 Financial Statements, Reports, Certificates.** Borrower shall deliver the following to Bank: (a) as soon as available, but in any event within thirty (30) days after the end of each calendar month, a company prepared consolidated balance sheet, income statement and, for each calendar month that is the last month of a fiscal quarter, cash flow statement, covering Borrower’s consolidated operations during such period (except that the cash flow statement shall cover the entire applicable fiscal quarter), prepared in accordance with GAAP, consistently applied, in a form acceptable to Bank and certified by a Responsible Officer; (b) as soon as available, but in any event within ninety (90) days after the end of Borrower’s fiscal year, audited consolidated financial statements of Borrower prepared in accordance with GAAP, consistently applied, together with an unqualified opinion on such financial statements of an independent certified public accounting firm reasonably acceptable to Bank; (c) copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and, if applicable, within five (5) days of such filings, all reports on Forms 10-K and 10-Q filed with the Securities and Exchange Commission; (d) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened in writing against Borrower or any Subsidiary that could reasonably be expected to result in damages or costs to Borrower or any Subsidiary of One Hundred Thousand Dollars (\$100,000) or more; (e) as soon as available, but in any event no later than the earlier to occur of thirty (30) days following the beginning of each fiscal year or the date of approval by Borrower’s board of directors, an annual operating budget and financial projections (including income statements, balance sheets and cash flow statements) for such fiscal year, presented in a quarterly format (provided, however, the projected revenues must be set forth for each month of such fiscal year), approved by Borrower’s board of directors, and in form and substance reasonably acceptable to Bank; and (f) such



budgets, sales projections, operating plans or other financial information as Bank may reasonably request from time to time.

Borrower shall deliver to Bank with the monthly financial statements a Compliance Certificate signed by a Responsible Officer in substantially the form of Exhibit C hereto.

Borrower shall deliver to the Bank as soon as available, but no later than thirty (30) days after the last day of each month, copies of the month end account statements for each account maintained by Borrower or its Subsidiaries, which statements may be provided to the Bank by Borrower or directly from the applicable institution(s).

Bank shall have a right from time to time hereafter to audit Borrower's Accounts and appraise Collateral at Borrower's expense, provided that such audits will be conducted no more often than every six (6) months unless an Event of Default has occurred and is continuing.

4. Section 6.7 of the Loan Agreement is hereby amended and restated in its entirety as follows:

**6.7 Accounts.** Borrower shall (i) maintain and shall cause each of its Subsidiaries to maintain its primary depository, operating, and investment accounts with Bank (including, without limitation, all depository, operating, and investment accounts maintained in the United States) and (ii) endeavor to utilize and shall cause each of its Subsidiaries to endeavor to utilize Bank's International Banking Division for any international banking services required by Borrower, including, but not limited to, foreign currency wires, hedges and swaps. Notwithstanding the foregoing, Borrower may continue to maintain, and cause its Subsidiaries to maintain (as applicable): (a) Borrower's account with Chase Bank in an amount not to exceed One Million Five Hundred Thousand Dollars (\$1,500,000) at any time, if (I) no later than June 16, 2023, Borrower must deliver to the Bank a control agreement in favor of the Bank with respect to such account in such form and substance as are reasonably acceptable to the Bank and (II) Borrower at all times maintains unrestricted cash balance of at least Five Million Dollars (\$5,000,000.00) with the Bank, (b) German Sub's account maintained outside of the United States in an amount not to exceed Five Hundred Thousand Dollars (\$500,000) at any time and (c) accounts maintained by other Foreign Subsidiaries outside of the United States in an aggregate amount not to exceed Two Hundred Fifty Thousand Dollars (\$250,000) at any time.

5. Limitation of Amendment.

- a. The amendments set forth above are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right, remedy or obligation which the Bank or Borrower may now have or may have in the future under or in connection with any Loan Document, as amended hereby.
- b. This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

6. The Bank hereby waives any and all Events of Default strictly resulting from Borrower's failure to comply with the provisions of Section 6.7(a) as in effect prior to the Seventh Amendment Date.
7. To induce the Bank to enter into this Amendment, Borrower hereby represents and warrants to the Bank as follows:

- a. Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct in all material respects as of such date), and (b) no Event of Default has occurred and is continuing;
  - b. Borrower has the power and due authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;
  - c. The organizational documents of Borrower delivered to the Bank on the Effective Date, and updated pursuant to subsequent deliveries by the Borrower to the Bank, if any, remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect;
  - d. The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, will not constitute an event of default under any material agreement with a Person binding on Borrower, or a breach of any provision contained in the Articles of Incorporation or Bylaws of Borrower; and
  - e. This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and by general equitable principles.
8. Except as expressly set forth herein, the Loan Agreement shall continue in full force and effect without alteration or amendment. This Amendment and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements.
  9. This Amendment shall be deemed effective as of the Amendment Date upon the due execution and delivery to the Bank of this Amendment by each party hereto.
  10. This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, and all of which, taken together, shall constitute one and the same instrument.
  11. This Amendment and the rights and obligations of the parties hereto shall be governed by and construed in accordance with the laws of the State of California.

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IN WITNESS WHEREOF, the parties hereto have caused this Seventh Amendment to the Amend and Restated Loan and Security Agreement to be executed as of the date first set forth above.

CYTOSORBENTS CORPORATION, A DELAWARE

CORPORATION

By: Kathleen P. Bloch

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Name: Kathleen P. Bloch

Title: Chief Financial Officer

CYTOSORBENTS MEDICAL, INC., A DELAWARE

CORPORATION

By: Kathleen P. Bloch

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Name: Kathleen P. Bloch

Title: Chief Financial Officer

WESTERN ALLIANCE BANK, AN ARIZONA

CORPORATION

By: Lan Zhu

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Name: Lan Zhu

Title: Vice President

ACTIVE 686874818v3

Certificate Of Completion

Envelope Id: 8787CEF7D0F04680BBA1B8EDCF8E70CA		Status: Completed
Subject: Western Alliance Bank – Loan Documents Cytosorbents		
Source Envelope:		
Document Pages: 4	Signatures: 3	Envelope Originator:
Certificate Pages: 4	Initials: 0	Janine Allen
AutoNav: Enabled		1 E Washington St Ste 1400
Envelopeld Stamping: Enabled		Phoenix, AZ 85004
Time Zone: (UTC-08:00) Pacific Time (US & Canada)		jallen@westernalliancebank.com
		IP Address: 38.29.192.250

Record Tracking

Status: Original	Holder: Janine Allen	Location: DocuSign
5/16/2023 8:14:46 AM	jallen@westernalliancebank.com	

Signer Events	Signature	Timestamp
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Lan Zhu lan.zhu@bridgebank.com Vice President Security Level: Email, Account Authentication (None)	<div><div>DocuSigned by:</div><div>Lan Zhu</div><div>3C02964F599C477...</div></div> <div>Signature Adoption: Pre-selected Style</div> <div>Using IP Address: 64.18.10.199</div> <div>Signed using mobile</div>	Sent: 5/16/2023 8:25:55 AM
		Viewed: 5/16/2023 11:02:29 AM
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Electronic Record and Signature Disclosure:  
Accepted: 5/16/2023 11:02:29 AM  
ID: 5aff6251-8e6a-4ee6-91dd-6bfa01b8b23e

Kathleen P. Bloch kbloch@cytosorbents.com Chief Financial Officer CytoSorbents Corporation Security Level: Email, Account Authentication (None). Authentication	<div><div>DocuSigned by:</div><div>Kathleen P. Bloch</div><div>E9CC8D95626D495...</div></div> <div>Signature Adoption: Pre-selected Style</div> <div>Using IP Address: 69.248.11.122</div>	Sent: 5/16/2023 8:25:55 AM
		Viewed: 5/16/2023 11:10:14 AM
		Signed: 5/16/2023 11:11:56 AM

Authentication Details

ID Check:	Question Details:
Transaction: 31021983499485	passed corporate.association.real
Result: passed	passed corporate.association.real
Vendor ID: LexisNexis	passed property.street.in.city.real
Type: iAuth	passed person.known.single.fake
Recipient Name Provided by: Recipient	passed vehicle.historical.association.real
Information Provided for ID Check: Address,	passed property.city.real
SSN9, SSN4, DOB	
Performed: 5/16/2023 11:10:04 AM	

Electronic Record and Signature Disclosure:  
Accepted: 5/16/2023 11:10:14 AM  
ID: 9706b569-b18c-40c4-9266-d0d94d00ddb1

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/16/2023 8:25:55 AM
Certified Delivered	Security Checked	5/16/2023 11:10:14 AM
Signing Complete	Security Checked	5/16/2023 11:11:56 AM
Completed	Security Checked	5/16/2023 11:11:56 AM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

**ELECTRONIC COMMUNICATIONS, RECORD AND SIGNATURES**

You agree that Western Alliance Bank ("we," "us," "our," or similar terms) may use electronic communications to enter into agreement and contracts between ourselves and you and otherwise to establish terms and conditions for products and services you receive from or through us. Electronic agreements may be provided to you through such things as hyperlinks or "click-through" agreements on our web site. Your consent to or agreement with the electronic communication in these circumstances may occur by your clicking "agreed" or similar terms, or by your subsequent use of a product or service, or otherwise as may be specified in the communication or as provided by law (subject to any limitations set forth in the communication). Your signature and agreement may be obtained by us electronically and includes mouse clicks, key strokes, your use of passwords or other authentication systems, or as is otherwise set forth in the particular electronic communication.

You agree not to contest the authorization for, or validity or enforceability of, our electronic records and documents, or the admissibility of copies thereof, under any applicable law related to whether certain agreements, files or records are to be in writing or signed by the party to be bound thereby. Records and electronically "signed" documents, if introduced as evidence on paper in any judicial or other proceedings, will be admissible to the same extent and under the same conditions as other documentary business records. Upon our request, you agree to manually sign or place your signature on any paper original of any record or "signed" document which we provide to you containing your purported signature.

If you choose not to agree to these terms, it will not limit our ability to otherwise communicate with you electronically, to the extent not prohibited by applicable law. However, it may slow the speed at which we can complete certain steps and complete transactions with you.

We reserve the right, from time to time, to deliver one or more communications in paper form instead of electronic form by mailing or emailing a communication to the last known mailing or email address on our records for you. In the event that we do so, we may continue to provide communications to you in electronic form.

If you download or print any confidential materials, be sure that you store them in a secure environment, just as you would paper-based bank records.

**Getting paper copies**

You may obtain paper copies of any of the communications the Bank provides to you electronically by sending your written request to **Western Alliance Bank, Atten: Treasury Management Support, One East Washington Street, Suite 1400, Phoenix, AZ 85004**. If you request a paper-based copy, the Bank will provide the first copy to you free of any Bank fees or charges. Although we do not currently impose a fee or other charge for additional paper copies of electronic communications, we reserve the right to impose a fee or charge in the future and to change such fee at any time.

**Required hardware and software**

In order for you to access and retain the electronic communications, you will need a computer with sufficient memory to store electronic records as well as a working connection to the internet. The requirements are as follows:

Operating System	Microsoft Internet Explorer	Apple Safari®	Mozilla Firefox®
Windows Vista®	9.0	4.0, 5.0	33.0, 34.0
Windows 7	10.0, 11.0	N/A	33.0, 34.0

Windows 8	10.0	N/A	33.0, 34.0
Windows 8.1	11.0	N/A	33.0, 34.0
Mac OS X 10.9 (Maverick™)	N/A	6.01	33.0, 34.0
<b>Hardware:</b>		<b>Browser configured to support:</b>	
• 1 GHz Celeron processor		• 128-bit encryption	
• 1024x768 SVGA resolution at 256 colors		• JavaScript	
• 500 MB RAM		• Cookies	
• 128 Kbps (slowest DSL) or better		• Cascading Style Sheets	
		• Browser page cache should be set to get a new version every visit to the page	

In addition, you will need to have Adobe® Reader installed on your device to be able to view and/or save the electronic documents.

**Access, Retention and Agreement Acknowledgement**

By checking the 'I Agree' box, I confirm and acknowledge each of the following:

- I can access and read this ELECTRONIC COMMUNICATIONS, RECORDS AND SIGNATURES document;
- I can print or electronically store and save this document, for future reference and access; and
- I agree to all of the terms of this ELECTRONIC COMMUNICATIONS, RECORDS AND SIGNATURES document.

Western Alliance Bank. Member FDIC.

**CERTIFICATION  
OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Phillip Chan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CytoSorbents Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2023

/s/ Phillip P. Chan

Phillip P. Chan Principal Executive Officer

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**CERTIFICATION  
OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Kathleen P. Bloch, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CytoSorbents Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2023

/s/ Kathleen P. Bloch

Kathleen P. Bloch Interim Principal Financial Officer

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**CERTIFICATION OF  
PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO 18 U.S.C. SECTION 1350  
AS ADOPTED PURSUANT TO SECTION 906  
OF THE SARBANES-OXLEY ACT of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Phillip Chan, Chief Executive Officer of CytoSorbents Corporation, hereby certify, that, to my knowledge:

1. The Quarterly Report on Form 10-Q for the quarter ended June 30, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in such Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, fairly presents, in all material respects, the financial condition and results of operations of CytoSorbents Corporation.

Date: August 1, 2023

**CYTOSORBENTS CORPORATION**

By: /s/ Phillip P. Chan

Phillip Chan

Chief Executive Officer

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**CERTIFICATION OF  
PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO 18 U.S.C. SECTION 1350  
AS ADOPTED PURSUANT TO SECTION 906  
OF THE SARBANES-OXLEY ACT of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Kathleen P. Bloch, the Chief Financial Officer of CytoSorbents Corporation, hereby certify, that, to my knowledge:

1. The Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in such Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, fairly presents, in all material respects, the financial condition and results of operations of CytoSorbents Corporation.

Date: August 1, 2023

**CYTOSORBENTS CORPORATION**

By: /s/ Kathleen P. Bloch

Kathleen P. Bloch

Interim Chief Financial Officer

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