

**PROSPECTUS SUPPLEMENT**  
**(To prospectus dated July 27, 2021)**

7,733,090 Shares of Common Stock  
Warrants to Purchase up to 2,706,561 Shares of Common Stock  
2,706,561 Shares of Common Stock Underlying Warrants



**CytoSorbents Corporation**

We are offering directly to investors 7,733,090 shares (the “Shares”) of our common stock, \$0.001 par value per share (“Common Stock”) and accompanying warrants to purchase up to 2,706,561 shares of our Common Stock (the “Warrants”) at a combined purchase price of \$1.33 per share of Common Stock and accompanying Warrant to purchase up to 0.35 shares of Common Stock for an aggregate purchase price of \$10,285,009.70. The Shares and the Warrants are being offered pursuant to that certain Securities Purchase Agreement, dated as December 11, 2023, by and among us and the investors identified therein (the “Investors”).

For purposes of clarity, the Shares and the Warrants are immediately separable and will be issued separately, but will be sold together in this offering. The Warrants have an exercise price of \$2.00 per share and will be exercisable beginning on the date of issuance and will expire five years from the date of issuance.

The 2,706,561 shares of Common Stock underlying the Warrants (the “Warrant Shares” and together with the Shares and the Warrants, the “Securities”) are also being offered pursuant to this prospectus supplement and the accompanying prospectus.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “CTSO.” On December 8, 2023, the last reported sale price of our Common Stock on the Nasdaq Capital Market was \$1.28 per share.

No placement agent or underwriter was involved in this offering.

**Investing in our Securities involves significant risks. See “Risk Factors” beginning on page S-9 of this prospectus supplement and in the documents incorporated by reference in this prospectus supplement for a discussion of the factors you should consider before deciding to purchase our Securities.**

There is no established public trading market for the Warrants and we do not expect a market to develop. Without an active trading market, we expect the liquidity of the Warrants will be limited.

Phillip Chan, our Chief Executive Officer, Kathleen Bloch, our Chief Financial Officer, Vincent Capponi, our President and Chief Operating Officer, Efthymios Deliargyris, our Chief Medical Officer, certain non-executive Company employees, including James Cason, Thomas Golobish, Irina Kulinets, and Bettina Sabisch, and Michael Bator, Edward Jones, Jiny Kim and Alan Sobel, each members of our Board of Directors, have agreed to purchase an aggregate of 327,070 Shares and accompanying Warrants to purchase an aggregate of up to 114,465 shares of Common Stock on the same terms as the other Investors participating in the offering.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.**

We expect that delivery of the Shares and the Warrants being offered pursuant to this prospectus supplement and the accompanying prospectus will be made on or about December 12, 2023.

**The date of this prospectus supplement is December 11, 2023**

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### Prospectus

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## ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement relates to the offering of the Securities. Before buying the Securities offered hereby, we urge you to carefully read this prospectus supplement, the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, together with the information incorporated herein by reference as described under the headings “Where You Can Find More Information” and “Incorporation by Reference.” These documents contain important information that you should consider when making your investment decision. This prospectus supplement contains information about the Securities offered hereby.

We have not authorized anyone to provide you with information that is different from, or in addition to, that contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated July 27, 2021, including the documents incorporated by reference therein, provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus supplement, we are referring to both parts of this document combined. To the extent there is a conflict between (i) the information contained in this prospectus supplement and (ii) the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission (the “SEC”) before the date of this prospectus supplement, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in the accompanying prospectus — the statement in the document having the later date modifies or supersedes the earlier statement.

We are not making offers to sell or solicitations to buy the Securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information in this prospectus supplement, the accompanying prospectus or any related free writing prospectus is accurate only as of the date on the front of the document and that any information that we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement or any related free writing prospectus, or any sale of a security.

Unless the context otherwise indicates, references in this prospectus supplement to “we,” “our” and “us” collectively refer to CytoSorbents Corporation, a Delaware corporation.

## FORWARD-LOOKING STATEMENTS

This prospectus supplement and the information incorporated by reference in this prospectus supplement include “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). All statements, other than statements of historical fact, included or incorporated by reference herein regarding our strategy, future operations, clinical trials, collaborations, intellectual property, cash resources, financial position, future revenues, projected costs, prospects, plans, and objectives of management are forward-looking statements. The words “believes,” “anticipates,” “estimates,” “plans,” “expects,” “intends,” “may,” “could,” “should,” “potential,” “likely,” “projects,” “continue,” “will,” “would” and similar expressions, and the negatives thereof, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

These statements are based on current expectations, estimates, forecasts and projections about the industry in which we operate and the beliefs and assumptions of our management. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause our actual results to differ materially from those indicated or implied by forward-looking statements. Accordingly, you are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions, including those referenced in the sections entitled “Risk Factors” included in this prospectus supplement and the accompanying prospectus, as well as in our most recent Annual Report on Form 10-K and our most recent Quarterly Report on Form 10-Q, as supplemented or amended, which are incorporated herein by reference. These risks and uncertainties include, among other matters: (i) our history of losses and expectation that we will continue to incur substantial future losses; (ii) our additional capital needs; (iii) the lack of assurance that we will be successful in developing and expanding commercial operations or balancing our research and development activities with our commercialization activities; (iv) our ability to receive adequate reimbursement from third-party payors; (v) our dependence on key personnel; (vi) acceptance of our medical devices in the marketplace; (vii) our ability to obtain and maintain patent protection; (viii) potential litigation; (ix) our ability to obtain and maintain regulatory approval; (x) our ability to successfully complete clinical studies; (xi) our exposure to product liability risk; and (xii) our exposure to political and global macro factors.

You also should carefully review the risk factors and cautionary statements described in the other documents we file or furnish from time to time with the SEC, including our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. In addition, any forward-looking statement represents our estimates only as of the date that such statement was made, and should not be relied upon as representing our estimates as of any subsequent date.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus supplement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

Any forward-looking statement represents our views as of the date of this prospectus supplement or the accompanying prospectus, as applicable. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we do not assume any obligation to update any forward-looking statements. We disclaim any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

This prospectus supplement and the accompanying prospectus include statistical and other industry and market data that we obtained from industry publications and research, surveys, and studies conducted by third parties. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Although we are responsible for the disclosure contained in this prospectus supplement and we believe the information from industry publications and other third-party sources included in this prospectus supplement is reliable, such information is inherently imprecise. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe that our internal assumptions are reasonable, no independent source has verified such assumptions.

## PROSPECTUS SUMMARY

*This summary highlights certain information about us, this offering, and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our Common Stock. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement, including the information incorporated by reference in this prospectus supplement, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information under the heading “Risk Factors” beginning on page S-9 and in the documents incorporated by reference into this prospectus supplement.*

### Our Business

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 completed, and in August 2023, the Company announced completion of the STAR-T trial, following the last scheduled patient follow-up.

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 221,000 human treatments as of September 30, 2023 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.

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 19 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+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.

#### **Corporate Information**

Our executive offices are located at 305 College Road East, Princeton, New Jersey 08540, and our telephone number is (732) 329-8885. Our website address is <http://www.cytosorbents.com>. We have included our website address as an inactive textual reference only. We are not including the information contained at <http://www.cytosorbents.com>, or at any other website address, as part of, or incorporating it by reference into, this prospectus supplement or the accompanying prospectus.

## THE OFFERING

Common Stock offered by us	7,733,090 shares of Common Stock (the “Shares”))
Warrants offered by us	<p>Warrants to purchase up to 2,706,561 shares of Common Stock. Each Warrant will have an exercise price of \$2.00 per share and will be exercisable during the period commencing from the date of their issuance and will expire five years from the date of issuance.</p> <p>The Shares and the Warrants are immediately separable and will be issued separately, but will be purchased together in this offering.</p> <p>The 2,706,561 shares of Common Stock underlying the Warrants are also being offered pursuant to this prospectus supplement and the accompanying prospectus.</p>
Offering Price	\$1.33 per share of Common Stock and accompanying Warrant to purchase up to 0.35 shares of Common Stock.
Common Stock to be outstanding immediately after this offering	52,211,599 shares of Common Stock (assuming no exercise of the Warrants)
Use of proceeds	We estimate that our net proceeds from this offering will be approximately \$9.83 million after deducting estimated offering fees and expenses payable by us. We currently intend to use the net proceeds from this offering for general corporate purposes, including to fund clinical and regulatory efforts to file for DrugSorb-ATR marketing approval in the United States and Canada, to fund clinical studies in the United States and Canada, to support growth initiatives for CytoSorb, to invest in clinical studies and the generation of new clinical data, to fund ongoing R&D initiatives and further develop products, and general working capital purposes. See “Use of Proceeds” on page S-12.
Risk factors	Investing in our Securities involves significant risks. See “Risk Factors” beginning on page S-9 of this prospectus supplement and the other information included in, or incorporated by reference into, this prospectus supplement for a discussion of certain factors you should carefully consider before deciding to invest in our Securities.
Nasdaq Capital Market symbol	“CTSO”
Insider Participation	Phillip Chan, our Chief Executive Officer, Kathleen Bloch, our Chief Financial Officer, Vincent Capponi, our President and Chief Operating Officer, Efthymios Deliarhyris, our Chief Medical Officer, certain non-executive Company employees, including James Cason, Thomas Golobish, Irina Kulinets, and Bettina Sabisch, and Michael Bator, Edward Jones, Jiny Kim and Alan Sobel, each members of our Board of Directors, have agreed to purchase an aggregate of 327,070 Shares and accompanying Warrants to purchase an aggregate of up to 114,465 shares of Common Stock on the same terms as the other Investors participating in the offering.
The number of shares of Common Stock to be outstanding after this offering, as set forth above, is based on 44,438,509 shares of Common Stock outstanding as of September 30, 2023, which amount excludes:	
<ul style="list-style-type: none"><li>8,923,219 aggregate shares of our Common Stock issuable upon the exercise of stock options outstanding under our Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan (the “LTIP”) and our 2006 Long-Term Incentive Plan (the “2006 LTIP”) as of September 30, 2023, at a weighted-average exercise price of \$4.74 per share, 5,653,877 options of which were exercisable as of such date;</li></ul>	

- 430,505 shares of our Common Stock underlying non-vested restricted stock units outstanding under our LTIP as of September 30, 2023, excluding restricted stock units that will only vest upon a “Change of Control” as defined in our LTIP;
- 1,867,230 shares of our Common Stock reserved for future awards under our LTIP as of September 30, 2023 at a weighted-average exercise price of \$3.53 per share;; and
- 2,897,750 Change of Control restricted stock units as of September 30, 2023, which would only vest upon a Change of Control to the Company, as defined in our LTIP.

Except as otherwise indicated, all information in this prospectus supplement assumes (i) no exercise of the Warrants; (ii) no exercise of the outstanding options described above; and (iii) no Common Stock has been issued upon the vesting of outstanding restricted stock units described above and (iv) no sales of shares of our Common Stock sold under our at-the-market offering facility with Jefferies LLC since September 30, 2023.

## RISK FACTORS

*An investment in our Common Stock involves a high degree of risk. Before deciding whether to invest in our Common Stock, you should carefully consider the risks described below and discussed under the sections captioned “Risk Factors” contained in our most recent Annual Report on Form 10-K and our most recent Quarterly Report on Form 10-Q, as supplemented or amended, as well as in any of our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, which are incorporated by reference herein in their entirety, together with other information in this prospectus supplement, the information and documents incorporated by reference in this prospectus supplement, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our Common Stock to decline, resulting in a loss of all or part of your investment.*

**We have broad discretion in the use of the net proceeds of this offering and, despite our efforts, we may use the proceeds in a manner that does not improve our operating results or increase the value of your investment.**

We currently anticipate that the net proceeds from this offering will be used for general corporate purposes, including to fund clinical and regulatory efforts to file for DrugSorb ATR marketing approval in the United States and Canada, to fund clinical studies in the United States and Canada, to support growth initiatives for CytoSorb, to invest in clinical studies and the generation of new clinical data, to fund ongoing R&D initiatives and further develop products, and general working capital purposes. However, we have not determined the specific allocation of the net proceeds to be used for general corporate purposes. Our management will have broad discretion over the use and investment of the net proceeds of this offering, and, accordingly, investors in this offering will need to rely upon the judgment of our management with respect to the use of proceeds, with only limited information concerning our specific intentions. These proceeds could be applied in ways that do not improve our operating results or increase the value of your investment. Please see the section entitled “Use of Proceeds” on page S-12 for further information.

**We will require additional capital in the future to fund our operations.**

As of September 30, 2023, the Company had cash on hand of approximately \$10.0 million, which includes approximately \$8.4 million of cash and cash equivalents and \$1.7 million of restricted cash, current assets of approximately \$19.3 million and current liabilities of approximately \$12.0 million. The Company will require additional financing in the future to support the commercialization of its products and proposed products, to initiate and complete new additional clinical studies, and for general working capital purposes. If the Company were to obtain such additional financing through equity financing, the current ownership interest of its stockholders would be diluted and there can be no assurance that the Company will be successful in its capital raising efforts. Should the financing the Company requires be unavailable to the Company, or on terms unacceptable to the Company when the Company requires it, the consequences could have a material adverse effect on the Company’s business, operating results, financial condition and prospects. The amount of long-term capital needed is expected to depend on many factors, including:

- rate of sales growth and adoption of the Company’s products in the marketplace;
- product gross margin;
- continued progress and cost of the Company’s research and development programs;
- progress with and cost of the Company’s pre-clinical studies and clinical studies;
- the time and costs involved in obtaining regulatory clearance in other countries and/or for other indications;
- costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
- costs of developing sales, marketing and distribution channels;
- market acceptance and reimbursement of the Company’s products; and cost for training physicians and other health care personnel.

The Company has an effective shelf registration statement with the SEC which enables it to raise up to \$105 million in equity financing, after giving effect to this Offering. In addition, on December 30, 2021, the Company entered into an Open Market Sale Agreement with Jefferies LLC for the offer and sale of up to an aggregate of \$25,000,000 of shares of the Company’s common stock. During the three months ended June 30, 2023, the Company sold a total of 230,605 shares of its common stock at an average price of \$3.47 per share, under the terms of the Open Market Sale Agreement, generating net proceeds of approximately \$776,000.

The Company is currently evaluating various financing alternatives, including debt financing, strategic partnerships and other non-equity financing arrangements, including royalty financing. While there can be no assurance that the Company will be successful in obtaining alternative non-equity financing, if such financing is obtained through arrangements with collaborative partners or other non-dilutive sources, such as royalty financing, the Company may have to relinquish economic and/or proprietary rights to some of its technologies or products under development that it would otherwise seek to develop or commercialize itself. Such events may have a material adverse effect on the Company's business, operating results, financial condition and prospects.

**You will experience immediate and substantial dilution in the net tangible book value per share of the Common Stock you purchase in the offering and as a result of future issuances of Common Stock or other equity securities. Also, sales of a significant number of shares of our Common Stock in the public markets could depress the market price of our Common Stock.**

You will incur immediate and substantial dilution as a result of this offering. The offering price per share of our Common Stock and accompanying warrant to purchase up to 0.35 shares of Common Stock offered pursuant to this prospectus supplement is substantially higher than the net tangible book value per share. Accordingly, purchasers in this offering will experience immediate dilution of approximately \$0.87 per share in as adjusted net tangible book value of the Common Stock. See the section entitled "Dilution" on page S-14 for a more detailed discussion of the dilution you may incur if you purchase Securities in this offering. Furthermore, if the warrants are exercised or we issue additional shares, whether upon exercise of our previously issued options or settlement of our previously issued restricted stock units, pursuant to our at-the-market offering facility with Jefferies LLC, or otherwise, you will experience further dilution.

Sales of a substantial number of shares of our Common Stock in the public markets could also depress the market price of our Common Stock, which could impair your ability to sell any shares of Common Stock that you purchase in this offering at prices above the price you pay in this offering and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our Common Stock would have on the market price of our Common Stock.

**We do not intend to pay any cash dividends on our Common Stock in the foreseeable future and, therefore, any return on your investment in our Common Stock must come from increases in the fair market value and trading price of our Common Stock.**

We do not intend to pay any cash dividends on our Common Stock in the foreseeable future and, therefore, any return on your investment in our Common Stock must come from increases in the fair market value and trading price of our Common Stock.

**The Warrants may not have any value.**

The Warrants have an exercise price per share of \$2.00 and will expire on the fifth anniversary of the date of issuance. In the event our Common Stock price does not exceed the exercise price of the Warrants during the period when the Warrants are exercisable, the Warrants may not have any value.

**There is no public market for the Warrants being offered in this offering.**

There is no established public trading market for the Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Warrants on any securities exchange or nationally recognized trading system, including Nasdaq. Without an active market, the liquidity of the Warrants will be limited.

**We may not receive any additional funds upon the exercise of the Warrants.**

Each Warrant may be exercised by way of a cashless exercise if at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for, the issuance of the Common Stock issuable upon exercise of the Warrants. Accordingly, the Company may not receive any additional funds upon exercise of the Warrants if the Warrants are exercised on a cashless basis.

**Holders of the Warrants purchased in this offering will have no rights as common stockholders with respect to the shares of Common Stock underlying the Warrants until such holders exercise their Warrants and acquire such shares of Common Stock.**

Until holders of Warrants acquire the underlying shares of our Common Stock upon exercise of such Warrants, holders of the Warrants will have no rights with respect to the shares of our Common Stock underlying such Warrants. Upon exercise of the Warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

**Provisions of the Warrants offered by this prospectus could discourage an acquisition of us by a third party.**

Certain provisions of the Warrants offered by this prospectus could make it more difficult or expensive for a third party to acquire us. The Warrants prohibit us from engaging in certain transactions constituting “fundamental transactions” unless, among other things, the surviving entity assumes our obligations under the Warrants. This and other provisions of the Warrants offered by this prospectus could prevent or deter a third party from acquiring us even where the acquisition could be beneficial to you.

## USE OF PROCEEDS

We expect to receive net proceeds of approximately \$9.83 million from this offering after deducting the estimated fees and expenses related to this offering payable by us.

We currently estimate that we will use the net proceeds from this offering for general corporate purposes, including to fund clinical and regulatory efforts to file for DrugSorb-ATR marketing approval in the United States and Canada, to fund clinical studies in the United States and Canada, to support growth initiatives for CytoSorb, to invest in clinical studies and the generation of new clinical data, to fund ongoing R&D initiatives and further develop products, and general working capital purposes.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures will depend on numerous factors, including the timing, progress, and success of our clinical trials, favorable responses from regulatory agencies such as the U.S. FDA and Health Canada, commercial sales and the impact of our sales and marketing efforts for CytoSorb, the ability to manufacture our products efficiently, our product development efforts, and other factors described under “Risk Factors” in this prospectus supplement and the documents incorporated by reference herein, as well as the amount of cash used in our operations. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds.

Based on our current operating plan, which includes the continuation or initiation of new clinical trials, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our planned operating expenses and capital expenditures into the third quarter of 2024. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. We continue to pursue less or non-dilutive sources of capital, such as debt, royalty financing, licensing, and strategic partnerships, and equity that are intended to supplement our cash position and fund our operating expenses into 2025.

Pending the uses described above, we may invest the net proceeds from this offering in investment-grade, interest-bearing securities.

## **DIVIDEND POLICY**

We have never declared or paid cash dividends on our capital stock and our current debt agreements preclude us from paying dividends. We currently intend to retain our future earnings, if any, for use in our business and therefore do not anticipate paying cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

## DILUTION

Purchasers of securities in this offering will experience immediate and substantial dilution to the extent of the difference between the combined price per share of Common Stock and accompanying warrant to purchase up to 0.35 shares of Common Stock and the net tangible book value per share of our Common Stock immediately after this offering. Our net tangible book value of our Common Stock as of September 30, 2023 was approximately \$14.4 million, or approximately \$0.32 per share of Common Stock based upon 44,438,509 shares outstanding. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares outstanding as of September 30, 2023.

After giving effect to the sale of 7,733,090 shares of Common Stock and accompanying Warrants to purchase up to 2,706,561 shares of our Common Stock at a combined offering price of \$1.33 per share of Common Stock and accompanying Warrant to purchase up to 0.35 shares of our Common Stock, our net tangible book value would have been approximately \$24.24 million, or \$0.47 per share of Common Stock. This represents an immediate increase in net tangible book value of approximately \$0.14 per share to our existing stockholders and an immediate dilution in net tangible book value of approximately \$0.87 per share to new investors in this offering. The following table illustrates this calculation on a per share basis.

Combined offering price per share of Common Stock and accompanying Warrant to purchase up to 0.35 shares of Common stock	\$	1.33
Net tangible book value per share as of September 30, 2023	\$	0.32
Increase in net tangible book value per share attributable to the offering	\$	0.14
As adjusted net tangible book value per share after giving effect to this offering	\$	0.47
Dilution per share to new investors participating in the offering	\$	0.87

The number of shares of Common Stock to be outstanding after this offering, as set forth above, is based on 44,438,509 shares of Common Stock outstanding as of September 30, 2023, which amount excludes:

- 8,923,219 aggregate shares of our Common Stock issuable upon the exercise of stock options outstanding under our Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan (the “LTIP”) and our 2006 Long-Term Incentive Plan (the “2006 LTIP”) as of September 30, 2023, at a weighted-average exercise price of \$4.74 per share, 5,653,877 options of which were exercisable as of such date;
- 430,505 shares of our Common Stock underlying non-vested restricted stock units outstanding under our LTIP as of September 30, 2023, excluding restricted stock units that will only vest upon a “Change of Control” as defined in our LTIP;
- 1,867,230 shares of our Common Stock reserved for future awards under our LTIP as of September 30, 2023 at a weighted-average exercise price of \$3.53 per share,; and
- 2,897,750 Change of Control restricted stock units as of September 30, 2023, which would only vest upon a Change of Control to the Company, as defined in our LTIP.

To the extent the Warrants are exercised, outstanding options are exercised at prices per share that are less than the prices paid by investors in this offering, or shares of Common Stock issued upon the vesting of outstanding restricted stock units, there will be further dilution to investors. In addition, to the extent that we issue additional equity securities in connection with future capital raising activities, our then-existing stockholders may experience dilution.

## CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2023 on:

- An actual basis; and
- An adjusted basis to give effect to this offering.

You should read the information in this table together with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and the accompanying notes incorporated by reference in this prospectus supplement and in the accompanying prospectus.

	As of September 30, 2023 (unaudited)	
	Actual	Adjusted
	(in thousands, except share and per share data)	
Cash and cash equivalents	\$ 8,359	\$ 18,189
Long-term debt	\$ 4,199	\$ 4,199
Stockholders’ equity		
Common stock: \$0.001 par value; 100,000,000 shares authorized, 44,438,509 shares issued and outstanding actual and      shares issued and outstanding as adjusted	44	52
Preferred stock: \$0.001 par value; 5,000,000 shares authorized, -0- shares issued and outstanding	—	—
Additional paid-in capital	292,154	301,976
Accumulated other comprehensive income	2,984	2,984
Accumulated deficit	(276,670)	(276,670)
Total Stockholders’ Equity	\$ 18,512	\$ 28,342
Total Capitalization	\$ 22,711	\$ 32,541

The number of shares of Common Stock to be outstanding after this offering, as set forth above, is based on 44,438,509 shares of Common Stock outstanding as of September 30, 2023, which amount excludes:

- 8,923,219 aggregate shares of our Common Stock issuable upon the exercise of stock options outstanding under our Amended and Restated CytoSorbents Corporation 2014 Long-Term Incentive Plan (the “LTIP”) and our 2006 Long-Term Incentive Plan (the “2006 LTIP”) as of September 30, 2023, at a weighted-average exercise price of \$4.74 per share, 5,653,877 options of which were exercisable as of such date;
- 430,505 shares of our Common Stock underlying non-vested restricted stock units outstanding under our LTIP as of September 30, 2023, excluding restricted stock units that will only vest upon a “Change of Control” as defined in our LTIP;
- 1,867,230 shares of our Common Stock reserved for future awards under our LTIP as of September 30, 2023 at a weighted-average exercise price of \$3.53 per share,; and
- 2,897,750 Change of Control restricted stock units as of September 30, 2023, which would only vest upon a Change of Control to the Company, as defined in our LTIP.

## PLAN OF DISTRIBUTION

We are offering the Shares and the Warrants directly to the Investors. We currently anticipate that the closing of the sale of the Shares and the Warrants will take place on December 12, 2023. On the closing date we will issue the Shares and the Warrants to the Investors, as applicable, and we will receive funds in the amount of the aggregate purchase price of \$10,285,009.70.

We have entered into a securities purchase agreement, dated as of December 11, 2023, with the Investors relating to the sale of our Securities under this prospectus supplement. Our obligation to issue and sell the Shares and the Warrants to the Investors is subject to the customary conditions set forth in the securities purchase agreement, which may be waived by us in our discretion. The Investors' obligation to purchase securities is subject to customary conditions set forth in the securities purchase agreement as well, which also may be waived.

Under the securities purchase agreement, subject to certain exceptions including an exception for sales of Common Stock made pursuant to our at-the-market offering facility with Jefferies LLC, we are subject to company lock-up restrictions on the issuance and sale of our securities for 60 days following the closing of this offering.

The Securities were offered directly to the Investors without a placement agent, underwriter, broker or dealer. The fees and expenses of this offering payable by us are estimated to be approximately \$455,000. Included in this estimate of fees and expenses is approximately \$350,000 payable by us with respect to certain financial advisory services provided to the Company.

## **LEGAL MATTERS**

The validity of the securities offered hereby will be passed upon by Morgan, Lewis & Bockius LLP, Princeton, New Jersey.

## **EXPERTS**

WithumSmith+Brown, PC, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2022 and the effectiveness of our internal control over financial reporting as of December 31, 2022, as set forth in their reports, which are incorporated by reference in this prospectus supplement and elsewhere in the registration statement of which this prospectus supplement forms a part. Our financial statements are incorporated by reference in reliance on WithumSmith+Brown, PC's reports, given on their authority as experts in accounting and auditing.

## **WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC's website at [www.sec.gov](http://www.sec.gov). Copies of certain information filed by us with the SEC are also available on our website at [www.cytosorbents.com](http://www.cytosorbents.com). Our website is not a part of this prospectus supplement and is not incorporated by reference into this prospectus supplement.

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement omits some information contained in our registration statement in accordance with the SEC's rules and regulations. You should review the information contained in any exhibits filed to the registration statement for further information on us and the securities we are offering. Statements in this prospectus supplement concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to those filings. You should review the complete document to evaluate these statements.

## INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference into this prospectus supplement is considered to be part of this prospectus supplement. Because we are incorporating by reference future filings with the SEC, this prospectus supplement is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus supplement. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement incorporates by reference the documents listed below (File No. 001-36792) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents deemed to be furnished and not filed) until the offering of the securities under the registration statement of which this prospectus supplement forms a part is terminated or completed:

- : [Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 9, 2023;](#)
- Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, filed with the SEC on [May 2, 2023](#), [August 1, 2023](#) and [November 9, 2023](#), respectively;
- : [The information contained in our Definitive Proxy Statement on Schedule 14A for our 2023 annual meeting of stockholders filed with the SEC on April 21, 2023, to the extent incorporated by reference in Part III of the Form 10-K;](#)
- Current Reports on Form 8-K filed with the SEC on [February 1, 2023](#), [April 6, 2023](#), [April 20, 2023](#), [April 26, 2023](#), [June 7, 2023](#), [July 7, 2023](#), [July 11, 2023](#), [July 19, 2023](#), [September 1, 2023](#), [September 12, 2023](#), [September 19, 2023](#) and [September 27, 2023](#) (except, with respect to such reports, portions deemed to be furnished and not filed); and
- : [The description of our Common Stock contained in Exhibit 4.1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 9, 2023, including any amendments, reports or exhibits filed for the purpose of updating such description.](#)

We will provide without charge to each person to whom a prospectus is delivered a copy of any or all of the information that has been incorporated by reference into but not delivered with this prospectus supplement. You may request a copy of these filings by writing or telephoning us at the following address or telephone number:

305 College Road East  
Princeton, New Jersey 08540  
Attn: Kathleen P. Bloch, CFO  
Phone: (732) 921-0149

The information in this prospectus is not complete and may be changed or supplemented. No securities described in this prospectus can be sold until the registration statement that we filed to cover the securities has become effective under the rules of the Securities and Exchange Commission. This prospectus is not an offer to sell the securities, nor is it a solicitation of an offer to buy the securities in any state where an offer or sale of the securities is not permitted.

**SUBJECT TO COMPLETION, DATED JULY 14, 2021**

**PROSPECTUS**



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**\$150,000,000**

**Common Stock, Preferred Stock,  
Debt Securities, Warrants and Units**

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We may offer from time to time in one or more offerings up to an aggregate of \$150,000,000 of the common stock, preferred stock, debt securities, warrants or units described in this prospectus, separately or together in one or more combinations. The preferred stock, debt securities, and warrants may be convertible into or exercisable or exchangeable for common stock or preferred stock or other securities, as identified in the applicable prospectus supplement.

This prospectus provides a general description of the securities we may offer. Each time we sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference herein and therein, before you invest in any of our securities. This prospectus may not be used to sell the securities unless accompanied by a prospectus supplement.

We may offer and sell the securities through underwriters, dealers or agents, or directly to purchasers, or through a combination of these methods. See "Plan of Distribution" beginning on page 18 of this prospectus.

Our common stock is listed on the Nasdaq Capital Market under the symbol "CTSO." The last reported sale price of our common stock on the Nasdaq Capital Market on July 13, 2021 was \$7.70 per share.

**Investing in our securities involves risk. See "Risk Factors" beginning on page 5 of this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference herein and therein, before you invest in any of our securities.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

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The date of this prospectus is \_\_\_\_\_, 2021

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process under the Securities Act of 1933, as amended (the “Securities Act”). Under this shelf registration process, we may offer and sell, from time to time, any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell the securities, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you in connection with the offering. The prospectus supplement and any related free writing prospectus may add, update or change information contained in this prospectus. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. You should carefully read this prospectus, the applicable prospectus supplement, and any applicable free writing prospectus, as well as the information and documents incorporated herein and therein by reference and the additional information under the heading “Where You Can Find More Information,” before making an investment decision.

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained in, or incorporated by reference into, this prospectus and the applicable prospectus supplement, and any free writing prospectus we have authorized for use in connection with a specific offering. You must not rely upon any other information or representation.

This prospectus and any accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and any accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus, any accompanying prospectus supplement and any applicable free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any accompanying prospectus supplement or any applicable free writing prospectus is delivered, or securities sold, on a later date.

This prospectus may not be used by us to consummate sales of our securities unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

This prospectus includes our trademarks and trade names, such as “CytoSorb,” “CytoSorb XL,” “ECOS-300CY,” “BetaSorb,” “ContrastSorb,” “DrugSorb,” “DrugSorb-ATR,” “HemoDefend-RBC,” “HemoDefend-BGA,” “K+ontrol” and “VetResQ,” which are protected under applicable intellectual property laws and are the property of CytoSorbents Corporation and its subsidiaries. This prospectus 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 prospectus may appear without the ™, ®, or SM 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.

Unless the context otherwise requires, references in this prospectus to “we,” “us,” “our,” or the “Company” refer to CytoSorbents Corporation, a Delaware corporation, and its subsidiaries.

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. This summary does not contain all the information that you should consider before investing in our securities. You should carefully read this entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including each of the documents incorporated herein or therein by reference, before making an investment decision.*

We are a leader in critical care immunotherapy, investigating and commercializing our CytoSorb blood purification technology to reduce deadly uncontrolled inflammation in hospitalized patients around the world, with the goal of preventing or treating multiple organ failure in life-threatening illnesses and cardiac surgery. Organ failure is the cause of nearly half of all deaths in the intensive care unit (“ICU”), with little to improve clinical outcome. CytoSorb, our flagship product, is approved in the European Union (“EU”) as a safe and effective extracorporeal cytokine filter and is designed to reduce the “cytokine storm” that could otherwise cause massive inflammation, organ failure and death in common critical illnesses such as sepsis, burn injury, trauma, lung injury, and pancreatitis. These are conditions where the mortality is extremely high, yet 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 a further E.U. label expansion for CytoSorb to remove the anti-platelet agent, ticagrelor, during urgent and emergent cardiothoracic surgery on cardiopulmonary bypass. In May 2020, we received another E.U. label expansion for CytoSorb to remove rivaroxaban, a Factor Xa inhibitor, for the same indication. We believe the current addressable market in the United States for ticagrelor removal in cardiac surgery is approximately \$250 million based on our current pricing model, assuming FDA approval, that could expand to \$500 million should ticagrelor gain market share as the only reversible mainstream anti-platelet agent. In the event that CytoSorb also obtains FDA approval to remove novel oral anticoagulants (“NOACs”) such as rivaroxaban and apixaban, we believe the total addressable market in the United States for ticagrelor and NOAC removal during cardiac surgery could potentially increase to approximately \$1.0 billion. In the event that CytoSorb obtains FDA approval to be used prophylactically to remove ticagrelor and NOACs in all patients undergoing surgery, we believe it would potentially expand the total addressable market in the United States to approximately \$2.0 billion.

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, shock, and stroke. 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 131,000 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 6,000 human treatments to date in COVID-19 patients. CytoSorb has also been granted FDA Breakthrough Designation for the removal of ticagrelor in a cardiopulmonary bypass circuit during emergent and urgent cardiothoracic surgery.

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 16 issued U.S. patents and multiple international patents, with applications pending both in the U.S. and internationally. In October 2020, we announced the E.U. approval of the ECOS-300CY™ adsorption cartridge for use with *ex vivo* organ perfusion systems to remove cytokines and other inflammatory mediators in the organ perfusate, with the goal of improving solid organ support or rehabilitation. 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.

In March 2011, CytoSorb was “CE Marked” in the E.U. as an extracorporeal cytokine filter indicated for use in clinical situations where cytokines are elevated, allowing for commercial marketing. The CE Mark demonstrates that a conformity assessment has been carried out and the product complies with the Medical Devices Directive. The goal of CytoSorb is to prevent or treat organ failure by reducing cytokine storm and the potentially deadly systemic inflammatory response syndrome (“SIRS”) in diseases such as sepsis, trauma, burn injury, acute respiratory distress syndrome, pancreatitis, liver failure, and many others. Organ failure is the leading cause of death in the ICU, and remains a major unmet medical need, with little more than supportive care therapy (e.g., mechanical ventilation, dialysis, vasopressors, fluid support, etc.) as treatment options. By potentially preventing or treating organ failure, CytoSorb may improve clinical outcome, including survival, while reducing the need for costly ICU treatment, thereby potentially saving significant healthcare costs.

The market focus for CytoSorb is the prevention or treatment of organ failure in life-threatening conditions, including commonly seen illnesses in the ICU such as infection and sepsis, trauma, burn injury, acute respiratory distress syndrome (“ARDS”), and others. Severe sepsis and septic shock, a potentially life-threatening systemic inflammatory response to a serious infection, accounts for approximately 10% to 20% of all ICU admissions, and is responsible for an estimated one in every five deaths worldwide. Sepsis is one of the largest target markets for CytoSorb. Sepsis is a major unmet medical need with no approved products in the U.S. or Europe to treat it. As with other critical care illnesses, multiple organ failure is the primary cause of death in sepsis. When used with standard of care therapy, that includes antibiotics, the goal of CytoSorb in sepsis is to reduce excessive levels of cytokines and other inflammatory toxins, to help reduce the SIRS response and either prevent or treat organ failure.

In addition to the sepsis indication, we intend to conduct or support additional clinical studies in sepsis, cardiac surgery, and other critical care diseases where CytoSorb could be used, such as ARDS, liver disease, trauma, severe burn injury, acute pancreatitis, and in other acute conditions that may benefit by the reduction of cytokines in the bloodstream. Some examples include the prevention of post-operative complications of cardiac surgery (cardiopulmonary bypass surgery) and damage to organs donated for transplant prior to organ harvest. We intend to generate additional clinical data to expand the scope of clinical experience for marketing purposes, to increase the number of treated patients, and to support potential future publications and regulatory submissions.

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 pivotal randomized, controlled trial to reduce the antithrombotic drug, ticagrelor, and reduce bleeding complications in patients undergoing cardiothoracic surgery while on the drug.
- 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 improving solid organ support or rehabilitation.
- 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+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.

## Corporate History

We were originally organized as a Delaware limited liability company in August 1997 as Advanced Renal Technologies, LLC. We changed our name to RenalTech International, LLC in November 1998, and to MedaSorb Technologies, LLC in October 2003. In December 2005, MedaSorb Technologies, LLC converted from a limited liability company to a corporation, called MedaSorb Technologies, Inc. CytoSorbents Corporation was incorporated in Nevada on April 25, 2002 as Gilder Enterprises, Inc., and was originally engaged in the business of installing and operating computer networks that provided high-speed access to the Internet. On June 30, 2006, we disposed of our original business, and pursuant to an Agreement and Plan of Merger, acquired all of the stock of MedaSorb Technologies, Inc., in a merger, and the business of MedaSorb Technologies, Inc. became our business. Following the merger, in July 2006, we changed our name to MedaSorb Technologies Corporation. In November 2008, we changed the name of our operating subsidiary from MedaSorb Technologies, Inc. to CytoSorbents, Inc. In May 2010, we finalized the name change of MedaSorb Technologies Corporation to CytoSorbents Corporation. On October 28, 2014, we changed the name of our operating subsidiary from CytoSorbents, Inc. to CytoSorbents Medical, Inc.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of this reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Immediately after the reverse stock split, pursuant to an Agreement and Plan of Merger dated December 3, 2014, we changed our state of incorporation from the State of Nevada to the State of Delaware, whereby we merged with and into our wholly-owned Delaware subsidiary. At the effective time of the merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) the Delaware subsidiary became the surviving corporation, (iv) the certificate of incorporation, as amended and restated, and the bylaws of the Delaware subsidiary became our certificate of incorporation and bylaws, and (v) each share of our common stock outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of our common stock as a Delaware corporation. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by our Board of Directors and stockholders representing a majority of our then-outstanding common stock. All references to “us”, “we”, or the Company, on or after December 3, 2014, refer to CytoSorbents Corporation, a Delaware corporation.

Our executive offices are located at 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852, and our telephone number is (732) 329-8885. Our website address is <http://www.cytosorbents.com>. We have included our website address as an inactive textual reference only. We are not including the information contained at <http://www.cytosorbents.com>, or at any other website address, as part of, or incorporating it by reference into, this prospectus or any accompanying prospectus supplement or related free writing prospectus. We make available free of charge through our website our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after we electronically file such material, or furnish it to the SEC. We also similarly make available, free of charge on our website, the reports filed with the SEC by our executive officers, directors and 10% stockholders pursuant to Section 16 under the Exchange Act as soon as reasonably practicable after copies of those filings are provided to us by those persons.

## **RISK FACTORS**

Investing in our securities involves risks. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. In particular, you should carefully consider the information under the heading “Risk Factors,” as well as the factors listed under the heading “Special Note Regarding Forward-Looking Statements,” in each case contained in our Annual Report on Form 10-K for our most recent fiscal year, in any Quarterly Reports on Form 10-Q that have been filed since our most recent Annual Report on Form 10-K and in any other documents that we file with the SEC under the Exchange Act, each of which is incorporated by reference in this prospectus. New risks may emerge in the future at any time, and we cannot predict such risks or estimate the extent to which they may affect our financial condition or performance. The prospectus supplement applicable to a specific offering may contain a discussion of additional risks applicable to an investment in us and our securities we are offering under that prospectus supplement. Each of the risks described could result in a decrease in the value of the securities and your investment therein.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus, any accompanying prospectus supplement or related free writing prospectus, and the documents incorporated by reference herein and therein may contain “forward-looking statements” within the meaning of the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. These forward-looking statements only provide our current expectations or forecasts of future events and financial performance and may be identified by the use of forward-looking terminology, including the terms “believes,” “estimates,” “anticipates,” “expects,” “plans,” “intends,” “may,” “will,” “should,” “could,” “predicts,” or the negative thereof, or other variations or comparable terminology, though the absence of these words does not necessarily mean that a statement is not forward-looking. Forward-looking statements include all matters that are not historical facts and include, without limitation, statements concerning possible or assumed future results of our operations; business strategies; future cash flows; financing plans; plans and objectives of management; any other statements regarding future operations, future cash needs, business plans and future financial results, and any other statements that are not historical facts. 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.

You should read carefully the risks described in the section entitled “Risk Factors” beginning on page 5 of this prospectus and those contained in our Annual Report on Form 10-K for our most recent fiscal year, in any Quarterly Reports on Form 10-Q that have been filed since our most recent Annual Report on Form 10-K and in any other documents that we file with the SEC under the Exchange Act, each of which is incorporated by reference in this prospectus. and in any accompanying prospectus supplement or related free writing prospectus, together with all information incorporated by reference herein and therein, to better understand the significant risks and uncertainties inherent in our business and underlying any forward-looking statements. As a result of these risks, actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements in this prospectus or in any accompanying prospectus supplement or related free writing prospectus, or incorporated by reference herein and therein, and you should not place undue reliance on any forward-looking statements.

Any forward-looking statements that we make in this prospectus speak only as of the date of such statements and we undertake no obligation to publicly update any forward-looking statements or to publicly announce revisions to any of the forward-looking statements, whether as a result of new information, future events or otherwise.

## **USE OF PROCEEDS**

Unless the applicable prospectus supplement states otherwise, we anticipate that the net proceeds from the sale of our securities will be used for general corporate purposes, including to fund clinical studies in the United States and abroad, expand production capacity, support our sales and marketing efforts and further develop our products, and we will retain broad discretion with respect to the allocation thereof.

Our preexisting shelf registration statement expires in August 2021. We believe it is good corporate practice to have an effective shelf registration statement on file with the SEC to preserve the flexibility to raise capital if and when needed. Although we currently have no specific plans to raise money at the time of filing this registration statement, if we choose to conduct a financing using this registration statement in the future, the specific purposes for the proceeds of such financing will be described in the prospectus supplement relating to the financing.

## **DESCRIPTION OF THE SECURITIES WE MAY OFFER**

The descriptions of the securities contained in this prospectus summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include in the prospectus supplement information, where applicable, about material U.S. federal income tax considerations relating to the securities, and the securities exchange, if any, on which the securities will be listed. In this prospectus, we refer to the common stock, preferred stock, debt securities, warrants or units, or any combination of the foregoing securities to be sold by us in a primary offering collectively as “securities.”

## DESCRIPTION OF CAPITAL STOCK

The following description of our common stock and preferred stock, together with the additional information we include in the applicable prospectus supplement, summarizes the material terms and provisions of the common stock and preferred stock that we may offer under this prospectus. It may not contain all the information that is important to you. For the complete terms of our common stock and preferred stock, please refer to our Second Amended and Restated Certificate of Incorporation (“Certificate of Incorporation”) and Bylaws, which are incorporated by reference into the registration statement which includes this prospectus. The Delaware General Corporation Law, or the DGCL, may also affect the terms of these securities.

### General

The total number of shares of capital stock that we have authority to issue is 105,000,000, consisting of (i) 100,000,000 shares of common stock, \$0.001 par value per share, and (ii) 5,000,000 shares of preferred stock, par value per share \$0.001. The outstanding shares of our Common Stock are fully paid and nonassessable.

### Common Stock

*Voting.* For all matters submitted to a vote of stockholders, each holder of our Common Stock is entitled to one vote for each share registered in such holder’s name. Except as may be required by law and in connection with some significant actions, such as mergers, consolidations, or amendments to our Certificate of Incorporation that affect the rights of stockholders, holders of our Common Stock vote together as a single class. Generally, the election of members of our Board of Directors (the “Board”) is determined by the vote of the majority of the votes cast by stockholders with respect to that director’s election. However, in a Contested Election (as defined in our Bylaws), directors of the Board are elected by a plurality of the votes cast by the stockholders entitled to vote (and not by majority vote).

*Dividends.* Subject to preferential dividend rights of any then outstanding preferred stock, the holders of Common Stock are entitled to receive dividends, as and when declared by our Board.

*Liquidation.* In the event we are liquidated, dissolved or our affairs are wound up, after we pay or make adequate provision for all of our known debts and liabilities, each holder of our Common Stock will be entitled to receive all of our assets available for distribution to our stockholders, subject to any preferential or other rights of any then outstanding preferred stock.

*Other Rights and Restrictions.* Subject to the preferential rights of any other class or series of stock, all shares of our Common Stock have equal dividend, distribution, liquidation and other rights, and have no preference, appraisal or exchange rights, except for any appraisal rights provided by Delaware law. Furthermore, holders of our Common Stock have no conversion, sinking fund or redemption rights, or preemptive rights to subscribe for any of our securities. Our Certificate of Incorporation and Bylaws do not restrict the ability of a holder of our Common Stock to transfer such holder’s shares of our Common Stock.

The rights, powers, preferences and privileges of holders of our Common Stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of preferred stock which we may designate and issue in the future.

*Listing.* Our common stock is listed on the Nasdaq Capital Market under the symbol “CTSO.”

*Transfer Agent and Registrar.* The transfer agent for our common stock is American Stock Transfer & Trust Company, LLC.

## Preferred Stock

Under our Certificate of Incorporation, we have the authority to issue preferred stock from time to time in one or more series, with such distinctive serial designations as shall be stated and expressed in the resolution or resolutions providing for the issue of such shares from time to time adopted by our Board. The resolutions of the Board providing for the issue of shares of each particular series of preferred stock may fix the annual rate or rates for dividends for the particular series, the dividend payment dates for the particular series and the date from which dividends on all shares of such series issued prior to the record date for the first dividend payment date shall be cumulative, the redemption price or prices for the particular series, the rights, if any, of holders of the shares of the particular series to convert the same into shares of any other series or other securities of the Company or of any other corporation, with any provisions for the subsequent adjustment of such conversion rights, and to classify or reclassify any unissued preferred stock by fixing or altering from time to time any of the foregoing rights, privileges and qualifications.

All of the preferred stock of any one series shall be identical with each other in all respects, except that shares of any one series issued at different times may differ as to the dates from which dividends thereon shall be cumulative; and all preferred stock shall be of equal rank, regardless of series, and shall be identical in all respects except as to the particulars fixed by the Board as provided in the Certificate of Incorporation. When we issue shares of our preferred stock, the shares will be fully paid and nonassessable and, unless specified in the applicable prospectus supplement, will not have or be subject to any rights of first refusal or similar rights.

The DGCL provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

## Certain Effects of Authorized but Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may issue these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital or facilitate corporate acquisitions or for payment as a dividend on our capital stock. The existence of unissued and unreserved common stock and preferred stock may enable our Board of Directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, if we issue preferred stock, the issuance could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation.

## Delaware Law and Certificate of Incorporation and Bylaws Provisions

*Board of Directors.* Our Bylaws provide that:

- subject to the rights of the holders of any series of preferred stock then outstanding, any directors, or the entire Board of Directors, may be removed from office at any time, with or without cause, by the affirmative vote of the holders of a majority of the voting power of all of the outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class; and
- vacancies in the Board of Directors resulting from such removal may be filled by a majority of the directors then in office, though less than a quorum, or by the sole remaining director. Directors so chosen shall hold office until the next annual meeting of stockholders at which the term of office of the class to which they have been elected expires.

These provisions could discourage, delay or prevent a change in control of our company or an acquisition of our company at a price which many stockholders may find attractive. The existence of these provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. These provisions may also have the effect of discouraging a third party from initiating a proxy contest, making a tender offer or attempting to change the composition or policies of our Board of Directors.

*Stockholder Action; Special Meeting of Stockholders.* Our Certificate of Incorporation and Bylaws also provide that:

- stockholder action may be taken only at a duly called and convened annual or special meeting of stockholders and then only if properly brought before the meeting;
- stockholder action may not be taken by written action in lieu of a meeting;
- special meetings of stockholders may be called only by our Board, the Chairman of our Board or by our Chief Executive Officer; and
- in order for any matter to be considered “properly brought” before a meeting, a stockholder must comply with requirements regarding specified information and advance notice to us.

These provisions could delay, until the next stockholders’ meeting, actions which are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because a person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder only at a duly called stockholders’ meeting, and not by written consent.

*Indemnification.* Our Certificate of Incorporation provides that we shall, to the fullest extent permitted by, and in accordance with the provisions of, the DGCL, indemnify each of our directors or officers or employees against expenses (including attorneys’ fees), judgments, taxes, fines and amounts paid in settlement, incurred by him in connection with, and shall advance expenses (including attorneys’ fees) incurred by him in defending, any threatened, pending or completed action, suit or proceeding (whether civil, criminal, administrative or investigative) to which such director, officer or employee is, or is threatened to be made, a party by reason of the fact that such director, officer or employee is or was a director or officer or employee of ours, or is or was serving at the request of us as a director, officer, partner, employee or agent of another domestic or foreign corporation, partnership, joint venture, trust or other enterprise. Advancement of expenses shall be made upon receipt of an undertaking, with such security, if any, as the Board of Directors or stockholders may reasonably require, by or on behalf of the person seeking indemnification to repay amounts advanced if it shall ultimately be determined that he or she is not entitled to be indemnified by us as authorized therein.

#### **Delaware Anti-Takeover Law**

We are subject to the provisions of Section 203 of the DGCL. Section 203 prohibits publicly held Delaware corporations from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation’s voting stock. These provisions could have the effect of delaying, deferring or preventing a change of control of our company or reducing the price that certain investors might be willing to pay in the future for shares of our stock.

#### **DESCRIPTION OF DEBT SECURITIES**

We may issue from time to time, in one or more offerings, senior or subordinated debt securities covered by this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus.

The debt securities will be issued under an indenture between us and a trustee, as it may be amended and supplemented from time to time. The form of the indenture is filed as an exhibit to the registration statement of which this prospectus is a part. You should read the indenture for provisions that may be important to you.

## DESCRIPTION OF WARRANTS

Please note that in this section references to holders mean those who own warrants registered in their own names, on the books that we or our agent maintain for this purpose, and not those who own beneficial interests in warrants registered in street name or in warrants issued in book-entry form through one or more depositaries. Owners of beneficial interests in the warrants should read the section below entitled “Book-Entry Procedures and Settlement”.

### *General*

We may offer warrants separately or together with our debt or equity securities.

We may issue warrants in such amounts or in as many distinct series as we wish. This section summarizes terms of the warrants that apply generally to all series. Most of the financial and other specific terms of your warrant will be described in the prospectus supplement. Those terms may vary from the terms described here.

The warrants of a series will be issued under a separate warrant agreement to be entered into between us and one or more banks or trust companies, as warrant agent, as set forth in the prospectus supplement. A form of each warrant agreement, including a form of warrant certificate representing each warrant, reflecting the particular terms and provisions of a series of offered warrants, will be filed with the SEC at the time of the offering and incorporated by reference in the registration statement of which this prospectus forms a part. You can obtain a copy of any form of warrant agreement when it has been filed by following the directions outlined in “Where You Can Find More Information; Incorporation of Documents by Reference” or by contacting the applicable warrant agent.

The following briefly summarizes the material provisions of the warrant agreements and the warrants. As you read this section, please remember that the specific terms of your warrant as described in the prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. You should read carefully the prospectus supplement and the more detailed provisions of the warrant agreement and the warrant certificate, including the defined terms, for provisions that may be important to you. If there are differences between the prospectus supplement and this prospectus, the prospectus supplement will control. Thus, the statements made in this section may not apply to your warrant.

### *Types of Warrants*

We may issue debt warrants or equity warrants. A debt warrant is a warrant for the purchase of our debt securities on terms to be determined at the time of sale. An equity warrant is a warrant for the purchase or sale of our equity securities. We may also issue warrants for the purchase or sale of, or whose cash value is determined by reference to the performance, level or value of, one or more of the following: securities of one or more issuers, including those issued by us and described in this prospectus or debt or equity securities issued by third parties; a currency or currencies; a commodity or commodities; and other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstances, or one or more indices or baskets of these items.

### *Information in the Prospectus Supplement*

The prospectus supplement will contain, where applicable, the following information about the warrants:

- the specific designation and aggregate number of, and the price at which we will issue, the warrants;
- the currency or currency unit with which the warrants may be purchased and in which any payments due to or from the holder upon exercise must be made;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the exercise price may be paid in cash, by the exchange of warrants or other securities or both, and the method of exercising the warrants;

- whether the warrants will be settled by delivery of the underlying securities or other property or in cash;
- whether and under what circumstances we may cancel the warrants prior to their expiration date, in which case the holders will be entitled to receive only the applicable cancellation amount, which may be either a fixed amount or an amount that varies during the term of the warrants in accordance with a schedule or formula;
- whether the warrants will be issued in global or non-global form;
- the identities of the warrant agent, any depositaries and any paying, transfer, calculation or other agents for the warrants;
- any securities exchange or quotation system on which the warrants or any securities deliverable upon exercise of the warrants may be listed;
- whether the warrants are to be sold separately or with other securities, and if the warrants are to be sold with the securities of another company or other companies, certain information regarding such company or companies; and
- any other terms of the warrants.

No holder of a warrant will, as such, have any rights of a holder of the debt securities, equity securities or other warrant property purchasable under or in the warrant, including any right to receive payment thereunder.

#### ***Additional Information in the Prospectus Supplement for Debt Warrants***

In the case of debt warrants, the prospectus supplement will contain, where appropriate, the following additional information:

- the designation, aggregate principal amount, currency and terms of the debt securities that may be purchased upon exercise of the debt warrants; and
- the designation, terms and amount of debt securities, if any, to be issued together with each of the debt warrants and the date, if any, after which the debt warrants and debt securities will be separately transferable.

#### ***No Limit on Issuance of Warrants***

The warrant agreements will not limit the number of warrants or other securities that we may issue, except for the limitation of the number of shares authorized.

#### ***Modifications***

We and the relevant warrant agent may, without the consent of the holders, amend each warrant agreement and the terms of each issue of warrants, for the purpose of curing any ambiguity or of correcting or supplementing any defective or inconsistent provision, or in any other manner that we may deem necessary or desirable and that will not adversely affect the interests of the holders of the outstanding unexercised warrants in any material respect.

We and the relevant warrant agent also may, with the consent of the holders of at least a majority in number of the outstanding unexercised warrants affected, modify or amend the warrant agreement and the terms of the warrants. No such modification or amendment may, without the consent of each holder of an affected warrant:

- reduce the amount receivable upon exercise, cancellation or expiration;
- shorten the period of time during which the warrants may be exercised;

- otherwise materially and adversely affect the exercise rights of the beneficial owners of the warrants; or
- reduce the percentage of outstanding warrants whose holders must consent to modification or amendment of the applicable warrant agreement or the terms of the warrants.

#### ***Warrant Agreements Will Not Be Qualified under Trust Indenture Act***

No warrant agreement will be qualified as an indenture, and no warrant agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of warrants issued under a warrant agreement will not have the protection of the Trust Indenture Act with respect to their warrants.

#### ***Enforceability of Rights by Beneficial Owner***

Each warrant agent will act solely as our agent in connection with the issuance and exercise of the applicable warrants and will not assume any obligation or relationship of agency or trust for or with any registered holder of or owner of a beneficial interest in any warrant. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant certificate, including any duty or responsibility to initiate any proceedings at law or otherwise or to make any demand upon us.

Holders may, without the consent of the applicable warrant agent, enforce by appropriate legal action, on their own behalf, their right to exercise their warrants, to receive debt securities, in the case of debt warrants, and to receive payment, if any, for their warrants, in the case of universal warrants.

#### ***Governing Law***

Unless otherwise stated in the prospectus supplement, the warrants and each warrant agreement will be governed by Delaware law.

### **DESCRIPTION OF UNITS**

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;

- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities” and “Description of Warrants” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

### **Issuance in Series**

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of your series will be described in the applicable prospectus supplement.

### **Unit Agreements**

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

#### ***Modification without Consent***

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

#### ***Modification with Consent***

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document. In each case, the required approval must be given by written consent.

#### ***Unit Agreements Will Not Be Qualified under Trust Indenture Act***

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

#### ***Governing Law***

The unit agreements and the units will be governed by Delaware law.

#### ***Form, Exchange and Transfer***

We will issue each unit in global—i.e., book-entry—form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

### ***Payments and Notices***

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

## **LEGAL OWNERSHIP OF SECURITIES**

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

### **Book-Entry Holders**

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its nominee. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

### **Street Name Holders**

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in “street name.” Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

## Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

## Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book entry form, how the depositary's rules and procedures will affect these matters.

## Global Securities

A global security is a security held by a depositary that represents one or any other number of individual securities. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, DTC will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under “—Special Situations When a Global Security Will Be Terminated.” As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

### **Special Considerations for Global Securities**

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe under “—Legal Holders” above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in a global security. We and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in a global security. We and the trustee also do not supervise the depositary in any way;
- the depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depositary's book entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

### **Special Situations When A Global Security Will Be Terminated**

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

The global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

#### **PLAN OF DISTRIBUTION**

We may offer securities under this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices;
- at negotiated prices; or
- a combination of these pricing methods.

We may also sell equity securities covered by this registration statement in an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price on or through the facilities of Nasdaq or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale. Such at the market offerings, if any, may be conducted by underwriters acting as principal or agent.

Each time that securities covered by this prospectus are sold, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to us, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we, or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

The securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

## General Information

Underwriters, dealers and agents that participate in the distribution of our securities may be underwriters as defined in the Securities Act, and any discounts or commissions they receive and any profit they make on the resale of the offered securities may be treated as underwriting discounts and commissions under the Securities Act. Any underwriters or agents will be identified and their compensation described in a prospectus supplement. We may indemnify agents, underwriters, and dealers against certain civil liabilities, including liabilities under the Securities Act, or make contributions to payments they may be required to make relating to those liabilities. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

Each series of securities offered by this prospectus may be a new issue of securities with no established trading market. Any underwriters to whom securities offered by this prospectus are sold by us for public offering and sale may make a market in the securities offered by this prospectus, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of the trading market for any securities offered by this prospectus.

Representatives of the underwriters through whom our securities are sold for public offering and sale may engage in over-allotment, stabilizing transactions, syndicate short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves syndicate sales in excess of the offering size, which creates a syndicate short position. Stabilizing transactions permit bids to purchase the offered securities so long as the stabilizing bids do not exceed a specified maximum.

Syndicate covering transactions involve purchases of the offered securities in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit the representative of the underwriters to reclaim a selling concession from a syndicate member when the offered securities originally sold by such syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Such stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the offered securities to be higher than it would otherwise be in the absence of such transactions. These transactions may be effected on a national securities exchange and, if commenced, may be discontinued at any time.

Underwriters, dealers and agents may be customers of, engage in transactions with or perform services for, us and our subsidiaries in the ordinary course of business.

We will bear all costs, expenses and fees in connection with the registration of the securities as well as the expense of all commissions and discounts, if any, attributable to the sales of any of our securities by us.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. In addition, we maintain a website at <http://www.cytosorbents.com> and make available free of charge on this website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained in, or accessible through, our website does not constitute a part of this prospectus or any accompanying prospectus supplement.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” much of the information we file with it, which means that we can disclose important information to you by referring you to those publicly available documents. All of the information that we incorporate by reference is considered to be part of this prospectus, and any of our subsequent filings with the SEC will automatically update and supersede this information. This prospectus incorporates by reference the documents listed below and any future filings made by CytoSorbents Corporation with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information furnished under Items 2.02 or 7.01 of our current reports on Form 8-K, or exhibits related thereto, between the date of this prospectus and the termination of the offering of the securities:

- [our annual report on Form 10-K for the fiscal year ended December 31, 2020, filed on March 9, 2021;](#)
- [the information specifically incorporated by reference into our annual report from our definitive proxy statement on Schedule 14A, filed on April 19, 2021;](#)
- [our quarterly report on Form 10-Q for the quarter ended March 31, 2021, filed on May 4, 2021;](#)
- our current reports on Form 8-K, filed on [February 18, 2021](#), [March 17, 2021](#), [March 31, 2021](#), [April 8, 2021](#), [April 15, 2021](#), [April 20, 2021](#), [June 2, 2021](#) and [July 6, 2021](#) (provided that any portions of such reports that are deemed furnished and not filed pursuant to instructions to Form 8-K shall not be incorporated by reference into this prospectus); and
- [our description of our common stock contained in Exhibit 4.1 to our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on March 4, 2020.](#)

Any statement contained in any document incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any additional prospectus supplements modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide, upon written or oral request, at no cost, to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in the prospectus but not delivered with the prospectus. You may request a copy of these filings by writing us at CytoSorbents Corporation, 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852. Our telephone number is (732) 329-8885. A copy of all documents that are incorporated by reference into this prospectus can also be found on our website by accessing <http://www.cytosorbents.com>.

You should rely only on the information incorporated by reference or provided in this prospectus or any supplement. We have not authorized anyone else to provide you with different information. You should not assume that information in this prospectus or any supplement is accurate as of any date other than the date on the front of these documents.

## LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Morgan, Lewis & Bockius LLP, Princeton, New Jersey. Additional legal matters may be passed upon by us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

## EXPERTS

The consolidated financial statements of CytoSorbents Corporation appearing in CytoSorbents Corporation’s [annual report on Form 10-K for the year ended December 31, 2020](#), and the effectiveness of CytoSorbents Corporation’s internal control over financial reporting as of December 31, 2020 have been audited by WithumSmith+Brown, PC, independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

The information in this prospectus is not complete and may be changed or supplemented. No securities described in this prospectus can be sold until the registration statement that we filed to cover the securities has become effective under the rules of the Securities and Exchange Commission. This prospectus is not an offer to sell the securities, nor is it a solicitation of an offer to buy the securities in any state where an offer or sale of the securities is not permitted.

**SUBJECT TO COMPLETION, DATED JULY 14, 2021**

**PROSPECTUS**



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**\$150,000,000**

**Common Stock, Preferred Stock,  
Debt Securities, Warrants and Units**

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We may offer from time to time in one or more offerings up to an aggregate of \$150,000,000 of the common stock, preferred stock, debt securities, warrants or units described in this prospectus, separately or together in one or more combinations. The preferred stock, debt securities, and warrants may be convertible into or exercisable or exchangeable for common stock or preferred stock or other securities, as identified in the applicable prospectus supplement.

This prospectus provides a general description of the securities we may offer. Each time we sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference herein and therein, before you invest in any of our securities. This prospectus may not be used to sell the securities unless accompanied by a prospectus supplement.

We may offer and sell the securities through underwriters, dealers or agents, or directly to purchasers, or through a combination of these methods. See “Plan of Distribution” beginning on page 18 of this prospectus.

Our common stock is listed on the Nasdaq Capital Market under the symbol “CTSO.” The last reported sale price of our common stock on the Nasdaq Capital Market on July 13, 2021 was \$7.70 per share.

**Investing in our securities involves risk. See “Risk Factors” beginning on page 5 of this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference herein and therein, before you invest in any of our securities.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

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The date of this prospectus is \_\_\_\_\_, 2021

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process under the Securities Act of 1933, as amended (the “Securities Act”). Under this shelf registration process, we may offer and sell, from time to time, any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell the securities, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you in connection with the offering. The prospectus supplement and any related free writing prospectus may add, update or change information contained in this prospectus. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. You should carefully read this prospectus, the applicable prospectus supplement, and any applicable free writing prospectus, as well as the information and documents incorporated herein and therein by reference and the additional information under the heading “Where You Can Find More Information,” before making an investment decision.

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained in, or incorporated by reference into, this prospectus and the applicable prospectus supplement, and any free writing prospectus we have authorized for use in connection with a specific offering. You must not rely upon any other information or representation.

This prospectus and any accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and any accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus, any accompanying prospectus supplement and any applicable free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any accompanying prospectus supplement or any applicable free writing prospectus is delivered, or securities sold, on a later date.

This prospectus may not be used by us to consummate sales of our securities unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

This prospectus includes our trademarks and trade names, such as “CytoSorb,” “CytoSorb XL,” “ECOS-300CY,” “BetaSorb,” “ContrastSorb,” “DrugSorb,” “DrugSorb-ATR,” “HemoDefend-RBC,” “HemoDefend-BGA,” “K+ontrol” and “VetResQ,” which are protected under applicable intellectual property laws and are the property of CytoSorbents Corporation and its subsidiaries. This prospectus 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 prospectus may appear without the ™, ®, or SM 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.

Unless the context otherwise requires, references in this prospectus to “we,” “us,” “our,” or the “Company” refer to CytoSorbents Corporation, a Delaware corporation, and its subsidiaries.

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. This summary does not contain all the information that you should consider before investing in our securities. You should carefully read this entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including each of the documents incorporated herein or therein by reference, before making an investment decision.*

We are a leader in critical care immunotherapy, investigating and commercializing our CytoSorb blood purification technology to reduce deadly uncontrolled inflammation in hospitalized patients around the world, with the goal of preventing or treating multiple organ failure in life-threatening illnesses and cardiac surgery. Organ failure is the cause of nearly half of all deaths in the intensive care unit (“ICU”), with little to improve clinical outcome. CytoSorb, our flagship product, is approved in the European Union (“EU”) as a safe and effective extracorporeal cytokine filter and is designed to reduce the “cytokine storm” that could otherwise cause massive inflammation, organ failure and death in common critical illnesses such as sepsis, burn injury, trauma, lung injury, and pancreatitis. These are conditions where the mortality is extremely high, yet 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 a further E.U. label expansion for CytoSorb to remove the anti-platelet agent, ticagrelor, during urgent and emergent cardiothoracic surgery on cardiopulmonary bypass. In May 2020, we received another E.U. label expansion for CytoSorb to remove rivaroxaban, a Factor Xa inhibitor, for the same indication. We believe the current addressable market in the United States for ticagrelor removal in cardiac surgery is approximately \$250 million based on our current pricing model, assuming FDA approval, that could expand to \$500 million should ticagrelor gain market share as the only reversible mainstream anti-platelet agent. In the event that CytoSorb also obtains FDA approval to remove novel oral anticoagulants (“NOACs”) such as rivaroxaban and apixaban, we believe the total addressable market in the United States for ticagrelor and NOAC removal during cardiac surgery could potentially increase to approximately \$1.0 billion. In the event that CytoSorb obtains FDA approval to be used prophylactically to remove ticagrelor and NOACs in all patients undergoing surgery, we believe it would potentially expand the total addressable market in the United States to approximately \$2.0 billion.

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, shock, and stroke. 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 131,000 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 6,000 human treatments to date in COVID-19 patients. CytoSorb has also been granted FDA Breakthrough Designation for the removal of ticagrelor in a cardiopulmonary bypass circuit during emergent and urgent cardiothoracic surgery.

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 16 issued U.S. patents and multiple international patents, with applications pending both in the U.S. and internationally. In October 2020, we announced the E.U. approval of the ECOS-300CY™ adsorption cartridge for use with *ex vivo* organ perfusion systems to remove cytokines and other inflammatory mediators in the organ perfusate, with the goal of improving solid organ support or rehabilitation. 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.

In March 2011, CytoSorb was “CE Marked” in the E.U. as an extracorporeal cytokine filter indicated for use in clinical situations where cytokines are elevated, allowing for commercial marketing. The CE Mark demonstrates that a conformity assessment has been carried out and the product complies with the Medical Devices Directive. The goal of CytoSorb is to prevent or treat organ failure by reducing cytokine storm and the potentially deadly systemic inflammatory response syndrome (“SIRS”) in diseases such as sepsis, trauma, burn injury, acute respiratory distress syndrome, pancreatitis, liver failure, and many others. Organ failure is the leading cause of death in the ICU, and remains a major unmet medical need, with little more than supportive care therapy (e.g., mechanical ventilation, dialysis, vasopressors, fluid support, etc.) as treatment options. By potentially preventing or treating organ failure, CytoSorb may improve clinical outcome, including survival, while reducing the need for costly ICU treatment, thereby potentially saving significant healthcare costs.

The market focus for CytoSorb is the prevention or treatment of organ failure in life-threatening conditions, including commonly seen illnesses in the ICU such as infection and sepsis, trauma, burn injury, acute respiratory distress syndrome (“ARDS”), and others. Severe sepsis and septic shock, a potentially life-threatening systemic inflammatory response to a serious infection, accounts for approximately 10% to 20% of all ICU admissions, and is responsible for an estimated one in every five deaths worldwide. Sepsis is one of the largest target markets for CytoSorb. Sepsis is a major unmet medical need with no approved products in the U.S. or Europe to treat it. As with other critical care illnesses, multiple organ failure is the primary cause of death in sepsis. When used with standard of care therapy, that includes antibiotics, the goal of CytoSorb in sepsis is to reduce excessive levels of cytokines and other inflammatory toxins, to help reduce the SIRS response and either prevent or treat organ failure.

In addition to the sepsis indication, we intend to conduct or support additional clinical studies in sepsis, cardiac surgery, and other critical care diseases where CytoSorb could be used, such as ARDS, liver disease, trauma, severe burn injury, acute pancreatitis, and in other acute conditions that may benefit by the reduction of cytokines in the bloodstream. Some examples include the prevention of post-operative complications of cardiac surgery (cardiopulmonary bypass surgery) and damage to organs donated for transplant prior to organ harvest. We intend to generate additional clinical data to expand the scope of clinical experience for marketing purposes, to increase the number of treated patients, and to support potential future publications and regulatory submissions.

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 pivotal randomized, controlled trial to reduce the antithrombotic drug, ticagrelor, and reduce bleeding complications in patients undergoing cardiothoracic surgery while on the drug.
- 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 improving solid organ support or rehabilitation.
- 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+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.

## Corporate History

We were originally organized as a Delaware limited liability company in August 1997 as Advanced Renal Technologies, LLC. We changed our name to RenalTech International, LLC in November 1998, and to MedaSorb Technologies, LLC in October 2003. In December 2005, MedaSorb Technologies, LLC converted from a limited liability company to a corporation, called MedaSorb Technologies, Inc. CytoSorbents Corporation was incorporated in Nevada on April 25, 2002 as Gilder Enterprises, Inc., and was originally engaged in the business of installing and operating computer networks that provided high-speed access to the Internet. On June 30, 2006, we disposed of our original business, and pursuant to an Agreement and Plan of Merger, acquired all of the stock of MedaSorb Technologies, Inc., in a merger, and the business of MedaSorb Technologies, Inc. became our business. Following the merger, in July 2006, we changed our name to MedaSorb Technologies Corporation. In November 2008, we changed the name of our operating subsidiary from MedaSorb Technologies, Inc. to CytoSorbents, Inc. In May 2010, we finalized the name change of MedaSorb Technologies Corporation to CytoSorbents Corporation. On October 28, 2014, we changed the name of our operating subsidiary from CytoSorbents, Inc. to CytoSorbents Medical, Inc.

On December 3, 2014, we effected a twenty-five-for-one (25:1) reverse split of our common stock. As a result of this reverse stock split, shares of our common stock outstanding were reduced by approximately 96%. Immediately after the reverse stock split, pursuant to an Agreement and Plan of Merger dated December 3, 2014, we changed our state of incorporation from the State of Nevada to the State of Delaware, whereby we merged with and into our wholly-owned Delaware subsidiary. At the effective time of the merger, (i) we merged with and into our Delaware subsidiary, (ii) our separate corporate existence in Nevada ceased to exist, (iii) the Delaware subsidiary became the surviving corporation, (iv) the certificate of incorporation, as amended and restated, and the bylaws of the Delaware subsidiary became our certificate of incorporation and bylaws, and (v) each share of our common stock outstanding immediately prior to the effective time was converted into one fully-paid and non-assessable share of our common stock as a Delaware corporation. The reverse stock split, the merger and the Agreement and Plan of Merger were approved by our Board of Directors and stockholders representing a majority of our then-outstanding common stock. All references to “us”, “we”, or the Company, on or after December 3, 2014, refer to CytoSorbents Corporation, a Delaware corporation.

Our executive offices are located at 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852, and our telephone number is (732) 329-8885. Our website address is <http://www.cytosorbents.com>. We have included our website address as an inactive textual reference only. We are not including the information contained at <http://www.cytosorbents.com>, or at any other website address, as part of, or incorporating it by reference into, this prospectus or any accompanying prospectus supplement or related free writing prospectus. We make available free of charge through our website our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after we electronically file such material, or furnish it to the SEC. We also similarly make available, free of charge on our website, the reports filed with the SEC by our executive officers, directors and 10% stockholders pursuant to Section 16 under the Exchange Act as soon as reasonably practicable after copies of those filings are provided to us by those persons.

## **RISK FACTORS**

Investing in our securities involves risks. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. In particular, you should carefully consider the information under the heading “Risk Factors,” as well as the factors listed under the heading “Special Note Regarding Forward-Looking Statements,” in each case contained in our Annual Report on Form 10-K for our most recent fiscal year, in any Quarterly Reports on Form 10-Q that have been filed since our most recent Annual Report on Form 10-K and in any other documents that we file with the SEC under the Exchange Act, each of which is incorporated by reference in this prospectus. New risks may emerge in the future at any time, and we cannot predict such risks or estimate the extent to which they may affect our financial condition or performance. The prospectus supplement applicable to a specific offering may contain a discussion of additional risks applicable to an investment in us and our securities we are offering under that prospectus supplement. Each of the risks described could result in a decrease in the value of the securities and your investment therein.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus, any accompanying prospectus supplement or related free writing prospectus, and the documents incorporated by reference herein and therein may contain “forward-looking statements” within the meaning of the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. These forward-looking statements only provide our current expectations or forecasts of future events and financial performance and may be identified by the use of forward-looking terminology, including the terms “believes,” “estimates,” “anticipates,” “expects,” “plans,” “intends,” “may,” “will,” “should,” “could,” “predicts,” or the negative thereof, or other variations or comparable terminology, though the absence of these words does not necessarily mean that a statement is not forward-looking. Forward-looking statements include all matters that are not historical facts and include, without limitation, statements concerning possible or assumed future results of our operations; business strategies; future cash flows; financing plans; plans and objectives of management; any other statements regarding future operations, future cash needs, business plans and future financial results, and any other statements that are not historical facts. 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.

You should read carefully the risks described in the section entitled “Risk Factors” beginning on page 5 of this prospectus and those contained in our Annual Report on Form 10-K for our most recent fiscal year, in any Quarterly Reports on Form 10-Q that have been filed since our most recent Annual Report on Form 10-K and in any other documents that we file with the SEC under the Exchange Act, each of which is incorporated by reference in this prospectus. and in any accompanying prospectus supplement or related free writing prospectus, together with all information incorporated by reference herein and therein, to better understand the significant risks and uncertainties inherent in our business and underlying any forward-looking statements. As a result of these risks, actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements in this prospectus or in any accompanying prospectus supplement or related free writing prospectus, or incorporated by reference herein and therein, and you should not place undue reliance on any forward-looking statements.

Any forward-looking statements that we make in this prospectus speak only as of the date of such statements and we undertake no obligation to publicly update any forward-looking statements or to publicly announce revisions to any of the forward-looking statements, whether as a result of new information, future events or otherwise.

## **USE OF PROCEEDS**

Unless the applicable prospectus supplement states otherwise, we anticipate that the net proceeds from the sale of our securities will be used for general corporate purposes, including to fund clinical studies in the United States and abroad, expand production capacity, support our sales and marketing efforts and further develop our products, and we will retain broad discretion with respect to the allocation thereof.

Our preexisting shelf registration statement expires in August 2021. We believe it is good corporate practice to have an effective shelf registration statement on file with the SEC to preserve the flexibility to raise capital if and when needed. Although we currently have no specific plans to raise money at the time of filing this registration statement, if we choose to conduct a financing using this registration statement in the future, the specific purposes for the proceeds of such financing will be described in the prospectus supplement relating to the financing.

## **DESCRIPTION OF THE SECURITIES WE MAY OFFER**

The descriptions of the securities contained in this prospectus summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include in the prospectus supplement information, where applicable, about material U.S. federal income tax considerations relating to the securities, and the securities exchange, if any, on which the securities will be listed. In this prospectus, we refer to the common stock, preferred stock, debt securities, warrants or units, or any combination of the foregoing securities to be sold by us in a primary offering collectively as “securities.”

## DESCRIPTION OF CAPITAL STOCK

The following description of our common stock and preferred stock, together with the additional information we include in the applicable prospectus supplement, summarizes the material terms and provisions of the common stock and preferred stock that we may offer under this prospectus. It may not contain all the information that is important to you. For the complete terms of our common stock and preferred stock, please refer to our Second Amended and Restated Certificate of Incorporation (“Certificate of Incorporation”) and Bylaws, which are incorporated by reference into the registration statement which includes this prospectus. The Delaware General Corporation Law, or the DGCL, may also affect the terms of these securities.

### General

The total number of shares of capital stock that we have authority to issue is 105,000,000, consisting of (i) 100,000,000 shares of common stock, \$0.001 par value per share, and (ii) 5,000,000 shares of preferred stock, par value per share \$0.001. The outstanding shares of our Common Stock are fully paid and nonassessable.

### Common Stock

*Voting.* For all matters submitted to a vote of stockholders, each holder of our Common Stock is entitled to one vote for each share registered in such holder’s name. Except as may be required by law and in connection with some significant actions, such as mergers, consolidations, or amendments to our Certificate of Incorporation that affect the rights of stockholders, holders of our Common Stock vote together as a single class. Generally, the election of members of our Board of Directors (the “Board”) is determined by the vote of the majority of the votes cast by stockholders with respect to that director’s election. However, in a Contested Election (as defined in our Bylaws), directors of the Board are elected by a plurality of the votes cast by the stockholders entitled to vote (and not by majority vote).

*Dividends.* Subject to preferential dividend rights of any then outstanding preferred stock, the holders of Common Stock are entitled to receive dividends, as and when declared by our Board.

*Liquidation.* In the event we are liquidated, dissolved or our affairs are wound up, after we pay or make adequate provision for all of our known debts and liabilities, each holder of our Common Stock will be entitled to receive all of our assets available for distribution to our stockholders, subject to any preferential or other rights of any then outstanding preferred stock.

*Other Rights and Restrictions.* Subject to the preferential rights of any other class or series of stock, all shares of our Common Stock have equal dividend, distribution, liquidation and other rights, and have no preference, appraisal or exchange rights, except for any appraisal rights provided by Delaware law. Furthermore, holders of our Common Stock have no conversion, sinking fund or redemption rights, or preemptive rights to subscribe for any of our securities. Our Certificate of Incorporation and Bylaws do not restrict the ability of a holder of our Common Stock to transfer such holder’s shares of our Common Stock.

The rights, powers, preferences and privileges of holders of our Common Stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of preferred stock which we may designate and issue in the future.

*Listing.* Our common stock is listed on the Nasdaq Capital Market under the symbol “CTSO.”

*Transfer Agent and Registrar.* The transfer agent for our common stock is American Stock Transfer & Trust Company, LLC.

## Preferred Stock

Under our Certificate of Incorporation, we have the authority to issue preferred stock from time to time in one or more series, with such distinctive serial designations as shall be stated and expressed in the resolution or resolutions providing for the issue of such shares from time to time adopted by our Board. The resolutions of the Board providing for the issue of shares of each particular series of preferred stock may fix the annual rate or rates for dividends for the particular series, the dividend payment dates for the particular series and the date from which dividends on all shares of such series issued prior to the record date for the first dividend payment date shall be cumulative, the redemption price or prices for the particular series, the rights, if any, of holders of the shares of the particular series to convert the same into shares of any other series or other securities of the Company or of any other corporation, with any provisions for the subsequent adjustment of such conversion rights, and to classify or reclassify any unissued preferred stock by fixing or altering from time to time any of the foregoing rights, privileges and qualifications.

All of the preferred stock of any one series shall be identical with each other in all respects, except that shares of any one series issued at different times may differ as to the dates from which dividends thereon shall be cumulative; and all preferred stock shall be of equal rank, regardless of series, and shall be identical in all respects except as to the particulars fixed by the Board as provided in the Certificate of Incorporation. When we issue shares of our preferred stock, the shares will be fully paid and nonassessable and, unless specified in the applicable prospectus supplement, will not have or be subject to any rights of first refusal or similar rights.

The DGCL provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

## Certain Effects of Authorized but Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may issue these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital or facilitate corporate acquisitions or for payment as a dividend on our capital stock. The existence of unissued and unreserved common stock and preferred stock may enable our Board of Directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, if we issue preferred stock, the issuance could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation.

## Delaware Law and Certificate of Incorporation and Bylaws Provisions

*Board of Directors.* Our Bylaws provide that:

- subject to the rights of the holders of any series of preferred stock then outstanding, any directors, or the entire Board of Directors, may be removed from office at any time, with or without cause, by the affirmative vote of the holders of a majority of the voting power of all of the outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class; and
- vacancies in the Board of Directors resulting from such removal may be filled by a majority of the directors then in office, though less than a quorum, or by the sole remaining director. Directors so chosen shall hold office until the next annual meeting of stockholders at which the term of office of the class to which they have been elected expires.

These provisions could discourage, delay or prevent a change in control of our company or an acquisition of our company at a price which many stockholders may find attractive. The existence of these provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. These provisions may also have the effect of discouraging a third party from initiating a proxy contest, making a tender offer or attempting to change the composition or policies of our Board of Directors.

*Stockholder Action; Special Meeting of Stockholders.* Our Certificate of Incorporation and Bylaws also provide that:

- stockholder action may be taken only at a duly called and convened annual or special meeting of stockholders and then only if properly brought before the meeting;
- stockholder action may not be taken by written action in lieu of a meeting;
- special meetings of stockholders may be called only by our Board, the Chairman of our Board or by our Chief Executive Officer; and
- in order for any matter to be considered “properly brought” before a meeting, a stockholder must comply with requirements regarding specified information and advance notice to us.

These provisions could delay, until the next stockholders’ meeting, actions which are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because a person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder only at a duly called stockholders’ meeting, and not by written consent.

*Indemnification.* Our Certificate of Incorporation provides that we shall, to the fullest extent permitted by, and in accordance with the provisions of, the DGCL, indemnify each of our directors or officers or employees against expenses (including attorneys’ fees), judgments, taxes, fines and amounts paid in settlement, incurred by him in connection with, and shall advance expenses (including attorneys’ fees) incurred by him in defending, any threatened, pending or completed action, suit or proceeding (whether civil, criminal, administrative or investigative) to which such director, officer or employee is, or is threatened to be made, a party by reason of the fact that such director, officer or employee is or was a director or officer or employee of ours, or is or was serving at the request of us as a director, officer, partner, employee or agent of another domestic or foreign corporation, partnership, joint venture, trust or other enterprise. Advancement of expenses shall be made upon receipt of an undertaking, with such security, if any, as the Board of Directors or stockholders may reasonably require, by or on behalf of the person seeking indemnification to repay amounts advanced if it shall ultimately be determined that he or she is not entitled to be indemnified by us as authorized therein.

#### **Delaware Anti-Takeover Law**

We are subject to the provisions of Section 203 of the DGCL. Section 203 prohibits publicly held Delaware corporations from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation’s voting stock. These provisions could have the effect of delaying, deferring or preventing a change of control of our company or reducing the price that certain investors might be willing to pay in the future for shares of our stock.

#### **DESCRIPTION OF DEBT SECURITIES**

We may issue from time to time, in one or more offerings, senior or subordinated debt securities covered by this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus.

The debt securities will be issued under an indenture between us and a trustee, as it may be amended and supplemented from time to time. The form of the indenture is filed as an exhibit to the registration statement of which this prospectus is a part. You should read the indenture for provisions that may be important to you.

## DESCRIPTION OF WARRANTS

Please note that in this section references to holders mean those who own warrants registered in their own names, on the books that we or our agent maintain for this purpose, and not those who own beneficial interests in warrants registered in street name or in warrants issued in book-entry form through one or more depositaries. Owners of beneficial interests in the warrants should read the section below entitled “Book-Entry Procedures and Settlement”.

### *General*

We may offer warrants separately or together with our debt or equity securities.

We may issue warrants in such amounts or in as many distinct series as we wish. This section summarizes terms of the warrants that apply generally to all series. Most of the financial and other specific terms of your warrant will be described in the prospectus supplement. Those terms may vary from the terms described here.

The warrants of a series will be issued under a separate warrant agreement to be entered into between us and one or more banks or trust companies, as warrant agent, as set forth in the prospectus supplement. A form of each warrant agreement, including a form of warrant certificate representing each warrant, reflecting the particular terms and provisions of a series of offered warrants, will be filed with the SEC at the time of the offering and incorporated by reference in the registration statement of which this prospectus forms a part. You can obtain a copy of any form of warrant agreement when it has been filed by following the directions outlined in “Where You Can Find More Information; Incorporation of Documents by Reference” or by contacting the applicable warrant agent.

The following briefly summarizes the material provisions of the warrant agreements and the warrants. As you read this section, please remember that the specific terms of your warrant as described in the prospectus supplement will supplement and, if applicable, may modify or replace the general terms described in this section. You should read carefully the prospectus supplement and the more detailed provisions of the warrant agreement and the warrant certificate, including the defined terms, for provisions that may be important to you. If there are differences between the prospectus supplement and this prospectus, the prospectus supplement will control. Thus, the statements made in this section may not apply to your warrant.

### *Types of Warrants*

We may issue debt warrants or equity warrants. A debt warrant is a warrant for the purchase of our debt securities on terms to be determined at the time of sale. An equity warrant is a warrant for the purchase or sale of our equity securities. We may also issue warrants for the purchase or sale of, or whose cash value is determined by reference to the performance, level or value of, one or more of the following: securities of one or more issuers, including those issued by us and described in this prospectus or debt or equity securities issued by third parties; a currency or currencies; a commodity or commodities; and other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstances, or one or more indices or baskets of these items.

### *Information in the Prospectus Supplement*

The prospectus supplement will contain, where applicable, the following information about the warrants:

- the specific designation and aggregate number of, and the price at which we will issue, the warrants;
- the currency or currency unit with which the warrants may be purchased and in which any payments due to or from the holder upon exercise must be made;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the exercise price may be paid in cash, by the exchange of warrants or other securities or both, and the method of exercising the warrants;

- whether the warrants will be settled by delivery of the underlying securities or other property or in cash;
- whether and under what circumstances we may cancel the warrants prior to their expiration date, in which case the holders will be entitled to receive only the applicable cancellation amount, which may be either a fixed amount or an amount that varies during the term of the warrants in accordance with a schedule or formula;
- whether the warrants will be issued in global or non-global form;
- the identities of the warrant agent, any depositaries and any paying, transfer, calculation or other agents for the warrants;
- any securities exchange or quotation system on which the warrants or any securities deliverable upon exercise of the warrants may be listed;
- whether the warrants are to be sold separately or with other securities, and if the warrants are to be sold with the securities of another company or other companies, certain information regarding such company or companies; and
- any other terms of the warrants.

No holder of a warrant will, as such, have any rights of a holder of the debt securities, equity securities or other warrant property purchasable under or in the warrant, including any right to receive payment thereunder.

#### ***Additional Information in the Prospectus Supplement for Debt Warrants***

In the case of debt warrants, the prospectus supplement will contain, where appropriate, the following additional information:

- the designation, aggregate principal amount, currency and terms of the debt securities that may be purchased upon exercise of the debt warrants; and
- the designation, terms and amount of debt securities, if any, to be issued together with each of the debt warrants and the date, if any, after which the debt warrants and debt securities will be separately transferable.

#### ***No Limit on Issuance of Warrants***

The warrant agreements will not limit the number of warrants or other securities that we may issue, except for the limitation of the number of shares authorized.

#### ***Modifications***

We and the relevant warrant agent may, without the consent of the holders, amend each warrant agreement and the terms of each issue of warrants, for the purpose of curing any ambiguity or of correcting or supplementing any defective or inconsistent provision, or in any other manner that we may deem necessary or desirable and that will not adversely affect the interests of the holders of the outstanding unexercised warrants in any material respect.

We and the relevant warrant agent also may, with the consent of the holders of at least a majority in number of the outstanding unexercised warrants affected, modify or amend the warrant agreement and the terms of the warrants. No such modification or amendment may, without the consent of each holder of an affected warrant:

- reduce the amount receivable upon exercise, cancellation or expiration;
- shorten the period of time during which the warrants may be exercised;

- otherwise materially and adversely affect the exercise rights of the beneficial owners of the warrants; or
- reduce the percentage of outstanding warrants whose holders must consent to modification or amendment of the applicable warrant agreement or the terms of the warrants.

#### ***Warrant Agreements Will Not Be Qualified under Trust Indenture Act***

No warrant agreement will be qualified as an indenture, and no warrant agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of warrants issued under a warrant agreement will not have the protection of the Trust Indenture Act with respect to their warrants.

#### ***Enforceability of Rights by Beneficial Owner***

Each warrant agent will act solely as our agent in connection with the issuance and exercise of the applicable warrants and will not assume any obligation or relationship of agency or trust for or with any registered holder of or owner of a beneficial interest in any warrant. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant certificate, including any duty or responsibility to initiate any proceedings at law or otherwise or to make any demand upon us.

Holders may, without the consent of the applicable warrant agent, enforce by appropriate legal action, on their own behalf, their right to exercise their warrants, to receive debt securities, in the case of debt warrants, and to receive payment, if any, for their warrants, in the case of universal warrants.

#### ***Governing Law***

Unless otherwise stated in the prospectus supplement, the warrants and each warrant agreement will be governed by Delaware law.

### **DESCRIPTION OF UNITS**

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;

- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities” and “Description of Warrants” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

### **Issuance in Series**

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of your series will be described in the applicable prospectus supplement.

### **Unit Agreements**

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

#### ***Modification without Consent***

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

#### ***Modification with Consent***

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document. In each case, the required approval must be given by written consent.

#### ***Unit Agreements Will Not Be Qualified under Trust Indenture Act***

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

#### ***Governing Law***

The unit agreements and the units will be governed by Delaware law.

#### ***Form, Exchange and Transfer***

We will issue each unit in global—i.e., book-entry—form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

### ***Payments and Notices***

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

## **LEGAL OWNERSHIP OF SECURITIES**

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

### **Book-Entry Holders**

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its nominee. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

### **Street Name Holders**

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in “street name.” Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

## Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

## Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book entry form, how the depositary's rules and procedures will affect these matters.

## Global Securities

A global security is a security held by a depositary that represents one or any other number of individual securities. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, DTC will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under “—Special Situations When a Global Security Will Be Terminated.” As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

### **Special Considerations for Global Securities**

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe under “—Legal Holders” above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in a global security. We and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in a global security. We and the trustee also do not supervise the depositary in any way;
- the depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depositary's book entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

### **Special Situations When A Global Security Will Be Terminated**

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

The global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

#### **PLAN OF DISTRIBUTION**

We may offer securities under this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices;
- at negotiated prices; or
- a combination of these pricing methods.

We may also sell equity securities covered by this registration statement in an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price on or through the facilities of Nasdaq or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale. Such at the market offerings, if any, may be conducted by underwriters acting as principal or agent.

Each time that securities covered by this prospectus are sold, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to us, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we, or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

The securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

## General Information

Underwriters, dealers and agents that participate in the distribution of our securities may be underwriters as defined in the Securities Act, and any discounts or commissions they receive and any profit they make on the resale of the offered securities may be treated as underwriting discounts and commissions under the Securities Act. Any underwriters or agents will be identified and their compensation described in a prospectus supplement. We may indemnify agents, underwriters, and dealers against certain civil liabilities, including liabilities under the Securities Act, or make contributions to payments they may be required to make relating to those liabilities. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

Each series of securities offered by this prospectus may be a new issue of securities with no established trading market. Any underwriters to whom securities offered by this prospectus are sold by us for public offering and sale may make a market in the securities offered by this prospectus, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of the trading market for any securities offered by this prospectus.

Representatives of the underwriters through whom our securities are sold for public offering and sale may engage in over-allotment, stabilizing transactions, syndicate short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves syndicate sales in excess of the offering size, which creates a syndicate short position. Stabilizing transactions permit bids to purchase the offered securities so long as the stabilizing bids do not exceed a specified maximum.

Syndicate covering transactions involve purchases of the offered securities in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit the representative of the underwriters to reclaim a selling concession from a syndicate member when the offered securities originally sold by such syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Such stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the offered securities to be higher than it would otherwise be in the absence of such transactions. These transactions may be effected on a national securities exchange and, if commenced, may be discontinued at any time.

Underwriters, dealers and agents may be customers of, engage in transactions with or perform services for, us and our subsidiaries in the ordinary course of business.

We will bear all costs, expenses and fees in connection with the registration of the securities as well as the expense of all commissions and discounts, if any, attributable to the sales of any of our securities by us.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. In addition, we maintain a website at <http://www.cytosorbents.com> and make available free of charge on this website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained in, or accessible through, our website does not constitute a part of this prospectus or any accompanying prospectus supplement.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” much of the information we file with it, which means that we can disclose important information to you by referring you to those publicly available documents. All of the information that we incorporate by reference is considered to be part of this prospectus, and any of our subsequent filings with the SEC will automatically update and supersede this information. This prospectus incorporates by reference the documents listed below and any future filings made by CytoSorbents Corporation with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information furnished under Items 2.02 or 7.01 of our current reports on Form 8-K, or exhibits related thereto, between the date of this prospectus and the termination of the offering of the securities:

- [our annual report on Form 10-K for the fiscal year ended December 31, 2020, filed on March 9, 2021;](#)
- [the information specifically incorporated by reference into our annual report from our definitive proxy statement on Schedule 14A, filed on April 19, 2021;](#)
- [our quarterly report on Form 10-Q for the quarter ended March 31, 2021, filed on May 4, 2021;](#)
- our current reports on Form 8-K, filed on [February 18, 2021](#), [March 17, 2021](#), [March 31, 2021](#), [April 8, 2021](#), [April 15, 2021](#), [April 20, 2021](#), [June 2, 2021](#) and [July 6, 2021](#) (provided that any portions of such reports that are deemed furnished and not filed pursuant to instructions to Form 8-K shall not be incorporated by reference into this prospectus); and
- [our description of our common stock contained in Exhibit 4.1 to our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on March 4, 2020.](#)

Any statement contained in any document incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any additional prospectus supplements modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide, upon written or oral request, at no cost, to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in the prospectus but not delivered with the prospectus. You may request a copy of these filings by writing us at CytoSorbents Corporation, 7 Deer Park Drive, Suite K, Monmouth Junction, New Jersey 08852. Our telephone number is (732) 329-8885. A copy of all documents that are incorporated by reference into this prospectus can also be found on our website by accessing <http://www.cytosorbents.com>.

You should rely only on the information incorporated by reference or provided in this prospectus or any supplement. We have not authorized anyone else to provide you with different information. You should not assume that information in this prospectus or any supplement is accurate as of any date other than the date on the front of these documents.

## LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Morgan, Lewis & Bockius LLP, Princeton, New Jersey. Additional legal matters may be passed upon by us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

## EXPERTS

The consolidated financial statements of CytoSorbents Corporation appearing in CytoSorbents Corporation’s [annual report on Form 10-K for the year ended December 31, 2020](#), and the effectiveness of CytoSorbents Corporation’s internal control over financial reporting as of December 31, 2020 have been audited by WithumSmith+Brown, PC, independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

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**7,733,090 Shares of Common Stock**

**Warrants to Purchase up to 2,706,561 Shares of Common Stock**

**2,706,561 Shares of Common Stock Underlying Warrants**



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**PROSPECTUS SUPPLEMENT**

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**December 11, 2023**

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