The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying base prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated September 14, 2021

Preliminary Prospectus Supplement (To prospectus dated March 19, 2021)



Common Stock

We are offering shares of our common stock. Our common stock is listed on The Nasdaq Capital Market, or Nasdaq, under the symbol "AVTX." On September 13, 2021, the last reported sale price of our common stock on Nasdaq was \$2.67 per share.

Investing in our securities involves a high degree of risk. Before making any investment decision, you should carefully review and consider all the information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, including the risks and uncertainties described under "Risk Factors" beginning on page S-5 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and the accompanying prospectus.

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 or the accompanying prospectus. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public offering price	\$	\$
Underwriting discounts and commissions(1)		
Proceeds, before expenses, to us		

⁽¹⁾ See the section of this prospectus supplement entitled "Underwriting" for a description of the compensation payable to the underwriters.

Delivery of the shares of common stock is expected to be made on or about shares of our common stock from us at the public offering price per share, less underwriting discounts and commissions. If the underwriters exercise their option in full, the total underwriting discounts and commissions payable by us will be \$, and the total proceeds to us, before expenses, will be \$.

Certain insiders may purchase securities in this offering. Because we have not entered into any binding agreements or received any commitments to purchase from any insiders, such insiders may elect not to purchase any securities in this offering. The underwriters will receive the same discounts and commissions with respect to securities purchased by such insiders as other securities offered in this prospectus supplement and the accompanying prospectus. The securities purchased by such insiders, if any, shall be subject to lock-up agreements with the underwriters as described in "Underwriting."

Joint Book-Running Managers

Jefferies

RBC Capital Markets

Prospectus Supplement dated

, 2021.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

ABOUT THIS PROSPECTUS SUPPLEMENT

On March 8, 2021, we filed with the Securities and Exchange Commission, or the SEC, a registration statement on Form S-3 (File No. 333-254000) utilizing a shelf registration process relating to the securities described in this prospectus supplement, which registration statement became effective on March 19, 2021. Under this shelf registration, we may, from time to time, sell common stock and other securities, including in this offering.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into the prospectus and this prospectus supplement. The second part is the accompanying prospectus dated March 19, 2021, which provides more general information, some of which does not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined.

If the description of the offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information contained in this prospectus supplement. To the extent there is any other conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the SEC before the date of this prospectus supplement, on the other hand, 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. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents we have referred you to in the section entitled "Where You Can Find More Information" below in this prospectus supplement.

You should rely only on the information incorporated by reference or provided in this prospectus supplement and the accompanying prospectus. Neither we nor any of the underwriters have authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction where it is unlawful to make such offer or solicitation. You should assume that the information contained in this prospectus supplement or the accompanying prospectus, or any document incorporated by reference in this prospectus supplement or the accompanying prospectus, is accurate only as of the date of those respective documents. Neither the delivery of this prospectus supplement nor any distribution of securities pursuant to this prospectus supplement shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference into this prospectus supplement or in our affairs since the date of this prospectus supplement. Our business, financial condition, results of operations and prospects may have changed since that date.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the shares of common stock to which it relates, nor do this prospectus supplement and the accompanying 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.

Unless otherwise indicated, information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus concerning our industry and the markets in which we operate, including market position and market opportunity, is based on information from our management's estimates, as well as from industry publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. However, assumptions and estimates of our future performance, and the future performance of our industry are subject to numerous known and unknown risks and uncertainties, including those described under the heading "Risk Factors" beginning on page S-5 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and accompanying prospectus. These and other important factors could result in our estimates and assumptions being materially

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different from future results. You should read the information contained in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus completely and with the understanding that future results may be materially different and worse from what we expect. See the information included under the heading "Special Note Regarding Forward-Looking Statements."

Unless the context otherwise requires, "Avalo," "the Company", "we," "us," "our" and similar terms refer to Avalo Therapeutics, Inc.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the information incorporated by reference herein and therein and any free writing prospectus that we have authorized for use in connection with this offering contain or may include "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Section 27A of the Securities Act of 1933, as amended, or the Securities Act. For these purposes, any statements contained or incorporated by reference herein regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management, other than statements of historical facts, are forward-looking statements. In some cases, forward-looking statements can be identified by the use of forward-looking words such as "believes," "expects," "may," "will," "plans," "intends," "estimates," "could," "should," "would," "continue," "seeks," "aims," "projects," "pro forma," "anticipates," "potential" or other similar words (including their use in the negative), or by discussions of future matters such as: the development of product candidates or products; timing and success of trial results and regulatory review; potential attributes and benefits of product candidates; the expansion of our drug portfolio; strategic alternatives for Millipred*, and other statements that are not historical.

These statements are based upon the current beliefs and expectations of Avalo's management but are subject to significant risks and uncertainties, including:

- drug development and manufacturing costs, timing and other risks, including reliance on investigators and enrollment of subjects in clinical trials, which might be slowed by the COVID-19 pandemic and competition;
- · the risks that preliminary findings from our clinical studies may not be indicative of subsequent study results;
- regulatory risks;
- our debt and cash position and the potential need for us to raise additional capital;
- · general economic and market risks and uncertainties, including those caused by the COVID-19 pandemic; and
- those other risks detailed in our filings with the SEC.

We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described above, those described in "critical accounting estimates" described in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations-Application of Critical Accounting Estimates" of our most recent annual report filed on Form 10-K, and those described below under the heading "Risk Factors" and under similar headings in other documents, including in our Annual Report on Form 10-K for the year ended December 31, 2020, our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2021 and June 30, 2021 and in other filings with the SEC, that are incorporated by reference in this prospectus supplement and the accompanying prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this prospectus supplement and accompanying prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained in other parts of this prospectus supplement, the accompanying prospectus or information incorporated by reference herein or therein from our filings with the SEC, listed in the section of the prospectus entitled "Incorporation of Certain Information by Reference." Because it is only a summary, it does not contain all of the information that you should consider before purchasing our securities in this offering and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere or incorporated by reference into this prospectus supplement and the accompanying prospectus. You should read the entire prospectus, the registration statement of which this prospectus supplement and the accompanying prospectus are a part, and the information incorporated by reference herein in their entirety, including the "Risk Factors" and our financial statements and the related notes incorporated by reference into this prospectus supplement and the accompanying prospectus, before purchasing our securities in this offering.

Company Overview

We are a leading clinical-stage precision medicine company that discovers, develops, and commercializes targeted therapeutics for patients with significant unmet clinical need in immunology, immuno-oncology, and rare genetic diseases. We have built a diverse portfolio of innovative therapies to deliver meaningful medical impact for patients in urgent need. Our clinical candidates commonly have a proven mechanistic rationale, biomarkers and/or an established proof-of-concept to expedite and increase the probability of success.

Overview of Our Pipeline

	Mechanism	Lead Indication	Designation	Clinical Development Stage			Anticipated
Program	of Action			Early-Stage	Mid-Stage	Late-Stage	Milestone
Immunology/Imi	nuno-oncology						
A1577 002	Anti-LIGHT mAb	COVID-19 ARDS	Fast Track				Received Fast Track Designation*
AVTX-002		Inflammatory bowel disease					Crohn's Top-line Data 2H 2021
NW 997	Anti-IL-18 mAb	Still's disease	-				Initial Data 4Q 2021
AVTX-007	Anti-IL-18 mAb	Multiple myeloma					Top-line Data 2H 2021
Rare Genetic Dis	eases						
AVTX-006	Dual mTOR inhibitor	Complex lymphatic malformations	ODD RPDD PRV eligible				Initial Data 4Q 2021
AVTX-801	D-Galactose replacement	PGM1-CDG	ODD RPDD PRV eligible Fast Track				Pivotal Trial Data 2022
AVTX-802	D-Mannose replacement	MPI-CDG		fi-			Pivotal Trial Data 2022
AVTX-803	L-Fucose replacement	LAD II (SLC35C1-CDG)					Pivotal Trial Data 1H 2022

^{*}Avalo remains in dialogue with the FDA and is working through feedback to determine the trial design for a registrational study and accompanying timelines, including the potenti expansion to a larger patient population in broader ARDS.

Recent Developments

On August 26, 2021, we changed our corporate name to Avalo Therapeutics, Inc. by filing a Certificate of Amendment to our Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware. This new name reflects our dedication to helping address the significant unmet medical need for patients, as well as to align with the forward momentum of our large and promising pipeline of potential first-in-class therapeutic candidates.

Preliminary Estimated Financial Data as of August 31, 2021

We estimate that, as of August 31, 2021, we had approximately \$42.0 million of cash and cash equivalents. This amount is unaudited and preliminary, subject to completion of monthly financial closing and review procedures that could result in changes to the amount, and does not present all information necessary for an understanding of our financial condition as of August 31, 2021. We do not present our financial statements as of and for off-quarter month ends. Complete quarter-end results as of and for the quarter ended September 30, 2021 will be included in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2021.

ARDS, acute respiratory distress syndrome; CDG, congenital disorder of glycosylation; IL, interleukin; IND, Investigational New Drug; LAD, leukocyte adhesion deficiency; mAb, monoclonal antibody;

MRI mannose physophate is omerane mTDR mammalian target of ranamycin; ODD, proban drug designation; PRMI photophopius mustate 1: PRV priority review wourher RPDD care pediatric disease designation.

The preliminary financial data included in this prospectus supplement is based on information available to management as of the date of this prospectus supplement and is subject to completion by management of our financial statements as of and for the quarter ended September 30, 2021. See "Risk Factors—Risks Related to the Offering—Our preliminary estimated financial data represents management's current estimates and is subject to change."

Corporate Information

Our principal executive offices are located at 540 Gaither Road, Suite 400, Rockville, Maryland 20850. Our website address is www.avalotx.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

The trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies or products.

Implications of Being a Smaller Reporting Company

We qualify as a "smaller reporting company" as defined in the Exchange Act which allows us to take advantage of many of the same exemptions from disclosure requirements including reduced disclosure obligations in our periodic reports and proxy statements. We may take advantage of these reduced disclosure obligations available to smaller reporting companies for so long as our voting and non-voting common stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Common Stock offered by us

Common stock to be outstanding immediately after this offering

Underwriters' option to purchase additional shares of common stock

Use of Proceeds

Risk Factors

Nasdaq symbol

Lock-up Agreements

shares

shares (or shares if the underwriters exercise their option in full to purchase additional shares of our common stock) (1)

We have granted the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to an additional shares of our common stock from us.

We intend to use the net proceeds for working capital and other general corporate purposes. See "Use of Proceeds" on page S-7 of this prospectus supplement.

Investing in our common stock involves a high degree of risk. Before making any investment decision, you should carefully review and consider all the information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, including the risks and uncertainties described under "Risk Factors" beginning on page S-5 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and the accompanying prospectus.

"AVTX"

We, our directors and executive officers and our principal stockholder have agreed with the underwriters that, without the prior written consent of Jefferies LLC and RBC Capital Markets, LLC, subject to certain exceptions, we, our directors and executive officers and our principal stockholder will not, for a period of 90 days, in either case, following the date of this prospectus supplement, offer or contract to sell any of our shares of common stock. See "Underwriting" on page S-11 of this prospectus supplement.

⁽¹⁾ The number of shares of common stock to be outstanding after this offering is based on an aggregate of 96,008,951 shares outstanding as of June 30, 2021, and excludes, as of that date, the following:

- 9,770,410 shares of our common stock issuable upon the exercise of stock options outstanding pursuant to the Third Amended and Restated 2016 Equity Incentive Plan, at a weighted-average exercise price of \$3.68 per share;
- 2,576,435 shares of common stock available for future issuance under the Third Amended and Restated 2016 Equity Incentive Plan;
- 1,836,622 shares of common stock reserved for future issuance under the Employee Stock Purchase Plan;
- 77,916 shares of unvested restricted stock units outstanding;
- 2,875,000 shares of our common stock issuable upon the exercise of stock options outstanding pursuant to equity compensation plans not approved by stockholders, at a weighted-average exercise price of \$3.95 per share;
- 1,676,923 pre-funded warrants exercisable at \$0.001 per share;
- · 4,406,224 warrants to purchase shares of our common stock at a weighted average exercise price of \$11.59 per share; and
- 2,000,000 shares of our common stock issued and sold subsequent to June 30, 2021, under our at-the-market sale program with Cantor Fitzgerald & Co. and RBC Capital Markets, LLC.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to purchase up to an additional shares of our common stock.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should consider carefully the risks and uncertainties described below together with the other information included in this prospectus supplement and the accompanying prospectus, and other information included in our securities filings, including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q and other information in our consolidated financial statements incorporated by reference herein, before deciding to purchase our securities. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment. Certain statements below are forward-looking statements. See the information included under the heading "Special Note Regarding Forward-Looking Statements."

Risks Related to the Offering

Purchasers of common stock in this offering will experience immediate and substantial dilution in the book value of their investment. You may experience further dilution upon exercise of our outstanding options and warrants.

Investors purchasing shares of common stock in this offering will pay a price per share that substantially exceeds the as adjusted book value per share of our tangible assets as of June 30, 2021. Our net tangible book value as of June 30, 2021 was approximately \$6.4 million, or \$0.07 per share of our common stock, based upon 96,008,951 shares of common stock outstanding on June 30, 2021. After giving effect to the sale of our common stock at an offering price of \$ per share of common stock, after deducting estimated offering commissions and expenses payable by us, our as adjusted net tangible book value as of June 30, 2021 would have been approximately \$ million, or \$ per share of common stock. This represents an immediate increase in the as adjusted net tangible book value of \$ per share to our existing stockholders and an immediate and substantial dilution in as adjusted net tangible book value of \$ per share to new investors who purchase our common stock in the offering. For a further description of the dilution that you will experience immediately after this offering, see the section in this prospectus supplement entitled "Dilution."

Future sales of our common stock, or the perception that such future sales may occur, may cause our stock price to decline.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales could occur, following this offering could cause the market price of our common stock to decline. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock sold in this offering upon issuance will be, freely tradable without restriction or further registration under the Securities Act.

We have broad discretion in the use of the net proceeds from this offering and we may not use them effectively

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled "Use of Proceeds," and you will be relying on the judgment of our management regarding the application of these proceeds. You will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our management might not apply the net proceeds or our existing cash in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering or our existing cash in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline. We intend to use the net proceeds from the offering for general corporate purposes and working capital, primarily to support the ongoing clinical development of key assets within our pipeline, and general and administrative expenses. These investments may not yield a favorable return to our stockholders. See "Use of Proceeds."

Raising additional capital, including as a result of this offering, may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our product candidates.

Until such time, if ever, as we can generate substantial revenue from the sale of our product candidates, we expect to finance our cash needs through a combination of equity offerings, debt financings and license and development agreements. To the extent that we raise additional capital through the sale of equity securities, including from this offering, or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. In addition, holders of secured debt securities that we have or may in

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the future issue do and would have a claim to our assets that would be senior to the rights of stockholders until the debt is paid. Interest on these debt securities would increase costs and negatively impact operating results. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements with third parties when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to third parties to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

We do not currently intend to pay dividends on our common stock, and any return to investors is expected to come, if at all, only from potential increases in the price of our common stock.

At the present time, we intend to use available funds to finance our operations. Accordingly, while payment of dividends rests within the discretion of our board of directors, we have no intention of paying any such dividends in the foreseeable future. Any return to investors is expected to come, if at all, only from potential increases in the price of our common stock.

Our preliminary estimated financial data represents management's current estimates and is subject to change.

The preliminary financial data contained in "Prospectus Supplement Summary – Preliminary Estimated Financial Data as of August 31, 2021" is only a preliminary estimate and is based on information available to management as of the date of this prospectus supplement and this estimate could change. Additionally, we do not present our financial statements as of and for off-quarter month ends. Complete quarterly results will be included in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2021. Such actual financial results will not be available until after this offering is completed and, consequently, will not be available to you prior to investing in this offering. See the other risks described in this section and "Special Note Regarding Forward-Looking Statements" for additional information regarding factors that could result in differences between this preliminary financial data and the actual financial results.

Risks Related to the Company

Preliminary findings from our clinical trials may not be predictive of subsequent study results.

The preliminary results of clinical trials of product candidates may not be predictive of the subsequent results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy results despite having progressed through preclinical studies and initial clinical trials. Many companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to adverse safety profiles or lack of efficacy, notwithstanding promising results in earlier studies. Similarly, our future clinical trial results may not be successful for these or other reasons.

This product candidate development risk is heightened by any changes in the planned clinical trials compared to the completed clinical trials. As product candidates are developed through preclinical to early- to late-stage clinical trials towards approval and commercialization, it is customary that various aspects of the development program, such as manufacturing and methods of administration, are altered along the way in an effort to optimize processes and results. While these types of changes are common and are intended to optimize the product candidates for late-stage clinical trials, approval and commercialization, such changes carry the risk that they will not achieve these intended objectives. In addition, nonclinical studies may be requested or required even after clinical trials have been commenced or completed.

Any of these changes could make the results of our planned clinical trials or other future clinical trials we may initiate less predictable and could cause our product candidates to perform differently, which could delay completion of our clinical trials, delay approval of our product candidates, and/or jeopardize our ability to commence product sales and generate revenues.

USE OF PROCEEDS

We estimate the net proceeds to us in this offering will be approximately \$\frac{1}{2}\$ million (or \$\frac{1}{2}\$ million if the underwriters exercise their option to purchase additional shares of our common stock in full), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds for working capital and other general corporate purposes.

The amounts and timing of our actual expenditures will depend on numerous factors, including the progress of our clinical trials and other development efforts and other factors described under "Risk Factors" in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein, as well as the amount of cash used in our operations. We will have broad discretion in the application of the net proceeds. Pending the use of the net proceeds described above, we may invest the net proceeds from this offering in one or a variety of capital preservation investments, which may include short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

Due to the uncertainties inherent in the preclinical and clinical development and regulatory process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering that may be used for any purpose. As a result, our management will have broad discretion in applying the net proceeds from this offering. Pending their ultimate use, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock. We anticipate that we will retain all of our future earnings, if any, for use in the expansion and operation of our business and 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.

DILUTION

If you invest in our common stock in this offering, you will experience dilution to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value on June 30, 2021 was approximately \$6.4 million, or \$0.07 per share of our common stock. "Net tangible book value" is total assets minus the sum of liabilities and intangible assets. "Net tangible book value per share" is net tangible book value divided by the total number of shares outstanding. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of our common stock in this offering at the public offering price of \$ per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our net tangible book value as of June 30, 2021 would have been approximately \$ million, or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and immediate dilution in net tangible book value of \$ per share to new investors purchasing our common stock. The following table illustrates this dilution on a per share basis.

Public offering price per share of common stock		\$
Net tangible book value per share as of June 30, 2021	\$ 0.07	
Increase in net tangible book value per share attributable to new investors		
As adjusted net tangible book value per share as of June 30, 2021 after giving effect to this offering		
Dilution in net tangible book value per share to investors in this offering		\$

The information above assumes that the underwriters do not exercise their option to purchase additional shares of our common stock. If the underwriters exercise their option in full to purchase additional shares of our common stock in this offering at the public offering price of \$ per share, the net tangible book value per share after this offering would be \$ per share, the immediate increase in the net tangible book value per share to existing stockholders would be \$ per share and the immediate dilution to investors participating in this offering would be \$ per share.

The above discussion and table are based on 96,008,951 shares of our common stock issued and outstanding as of June 30, 2021, and excludes (as of June 30, 2021):

- 9,770,410 shares of our common stock issuable upon the exercise of stock options outstanding pursuant to the Third Amended and Restated 2016 Equity Incentive Plan, at a weighted-average exercise price of \$3.68 per share;
- 2,576,435 shares of common stock available for future issuance under the Third Amended and Restated 2016 Equity Incentive Plan;
- 1,836,622 shares of common stock reserved for future issuance under the Employee Stock Purchase Plan;
- 77,916 shares of unvested restricted stock units outstanding;
- 2,875,000 shares of our common stock issuable upon the exercise of stock options outstanding pursuant to equity compensation plans not approved by stockholders, at a weighted-average exercise price of \$3.95 per share;
- 1,676,923 pre-funded warrants exercisable at \$0.001 per share;
- 4,406,224 warrants to purchase shares of our common stock at a weighted average exercise price of \$11.59 per share; and
- 2,000,000 shares of our common stock issued and sold subsequent to June 30, 2021, under our at-the-market sale program with Cantor Fitzgerald & Co. and RBC Capital Markets, LLC.

Because there is no minimum offering amount required as a condition to the closing of this offering, the dilution per share to the new investors may be more than that indicated above in the event that the actual number of shares sold are less than the maximum number of shares of our common stock we are offering.

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The above illustration of dilution per share to the investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or warrants to purchase shares of our common stock that will be outstanding after this offering. The exercise, if any, of outstanding options and warrants that will be outstanding after this offering having an exercise price less than the offering price will increase dilution to the new investors.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2021, among us, Jefferies LLC and RBC Capital Markets, LLC as the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of our common stock shown opposite its name below:

Underwriters	Number of Shares
Jefferies LLC	
RBC Capital Markets, LLC	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of our common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of our common stock subject to their acceptance of the shares of the common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement, and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$ per share of common stock. After the offering, the public offering price, concession and reallowance to dealers may be reduced by Jefferies LLC or RBC Capital Markets, LLC. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER S	SHARE	TOTAL		
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	
Public offering price	\$	\$	\$	\$	
Underwriting discounts and commissions	\$	\$	\$	\$	
Proceeds to us, before expenses	\$	\$	\$	\$	

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Certain insiders may purchase securities in this offering. Because we have not entered into any binding agreements or received any commitments to purchase from any insiders, such insiders may elect not to purchase any securities in this offering. The underwriters will receive the same discounts and commissions with respect to securities purchased by such insiders as other securities offered in this prospectus supplement and accompanying prospectus. The securities purchased by such insiders, if any, shall be subject to lock-up agreements with the underwriters.

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$, which includes the fees and expenses for which we have agreed to reimburse the underwriters, including fees and expenses of their counsel, in an amount not to exceed \$150,000.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "AVTX."

Stamp Taxes

If you purchase shares of our common stock offered in this prospectus supplement, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus supplement.

Option to Purchase Additional Shares of Common Stock

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus supplement, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares of common stock proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus supplement.

No Sales of Similar Securities

We, our executive officers, our directors and our principal stockholder have agreed, subject to specified exceptions, not to directly or indirectly, for a period of 90 days after the date of this prospectus supplement without the prior written consent of Jefferies LLC and RBC Capital Markets, LLC:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Exchange Act, or
- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing for a period of 90 days after the date of this prospectus supplement without the prior written consent of Jefferies LLC and RBC Capital Markets, LLC.

Each of Jefferies LLC and RBC Capital Markets, LLC may, in its sole discretion and at any time or from time to time before the termination of the 90-day period, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our stockholders who will execute a lock-up agreement providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Exchange Act, and certain persons participating in the offering, may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

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"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market-making transactions in our common stock on Nasdaq in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus supplement, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their respective affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely

affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. Jurisdictions

Canada

Resale Restrictions

The distribution of our shares of common stock in Canada is being made only in the provinces of Ontario, Quebec, Alberta and British Columbia on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares of common stock in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the securities.

Representations of Canadian Purchasers

By purchasing our shares of common stock in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the shares without the benefit of a prospectus qualified under those securities laws as it is an "accredited investor" as defined under National Instrument 45-106—Prospectus Exemptions,
- the purchaser is a "permitted client" as defined in National Instrument 31-103—Registration Requirements, Exemptions and Ongoing Registrant Obligations,
- · where required by law, the purchaser is purchasing as principal and not as agent, and
- the purchaser has reviewed the text above under Resale Restrictions.

Conflicts of Interest

Canadian purchasers are hereby notified that the underwriters are relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105 — *Underwriting Conflicts* from having to provide certain conflict of interest disclosure in this document.

Statutory Rights of Action

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the prospectus supplement (including any amendment thereto) such as this document contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser of these securities in Canada should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Enforcement of Legal Rights

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

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Taxation and Eligibility for Investment

Canadian purchasers of our shares of common stock should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares in their particular circumstances and about the eligibility of the shares for investment by the purchaser under relevant Canadian legislation.

Australia

This prospectus supplement and the accompanying base prospectus are not disclosure documents for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or the Corporations Act, have not been lodged with the Australian Securities & Investments Commission and are only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus supplement and the accompanying base prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; or
- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act, any offer made to you under this prospectus supplement and the accompanying base prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the shares issued to you pursuant to this prospectus supplement and the accompanying base prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

European Economic Area and the United Kingdom

In relation to each member state of the European Economic Area and the United Kingdom (each, a "State"), an offer to the public of any securities which are the subject of the offering contemplated by this prospectus supplement and the accompanying prospectus may not be made in that State except that an offer to the public in that State of any securities may be made at any time under the following exemptions under the EU Prospectus Regulation and the UK Prospectus Regulation:

- to any legal entity which is a "qualified investor" as defined in the EU Prospectus Regulation (in relation to a member state of the European Economic Area) or the UK Prospectus Regulation (in relation to the United Kingdom);
- to fewer than 150 natural or legal persons (other than qualified investors as defined in the EU Prospectus Regulation (in relation to a member state of the European Economic Area) or the UK Prospectus Regulation (in relation to the United Kingdom)), as permitted under the Prospectus Regulation, subject to obtaining the prior consent of the underwriters or the underwriters nominated by the Company for any such offer; or
- in any other circumstances falling within Article 1(4) of the EU Prospectus Regulation (in relation to a member state of the European Economic Area) or the UK Prospectus Regulation (in relation to the United Kingdom),

provided that no such offer of securities shall require the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the EU Prospectus Regulation or Article 3 of the UK Prospectus Regulation or Article 23 of the EU Prospectus Regulation or Article 23 of the UK Prospectus Regulation.

For the purposes of this provision, the expression "offer to the public" in relation to any securities in any State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, the expression "EU Prospectus Regulation" means Regulation (EU) 2017/1129 and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129, as it forms part of UK law from time to time by virtue of the European Union (Withdrawal) Act 2018 and any regulations made under that Act.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong, or SFO, and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong, or CO, or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus supplement and the accompanying base prospectus have not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus supplement and the accompanying base prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus supplement, the accompanying base prospectus and the relevant offering documents and that he is not acquiring, and has not been offered, any securities in circumstances that contravene any such restrictions.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this prospectus supplement is being distributed only to, and is directed only at, and any offer of the shares is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals", each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the underwriters will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus supplement and the accompanying base prospectus have not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and the accompanying base prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275, (1A), and in accordance with the conditions specified in Section 275, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a. a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

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b. a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor.

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- i. to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- ii. where no consideration is or will be given for the transfer;
- iii. where the transfer is by operation of law;
- iv. as specified in Section 276(7) of the SFA; or
- v. as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus supplement and the accompanying base prospectus have been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the SWiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus supplement and the accompanying base prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus supplement and the accompanying base prospectus nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus supplement and the accompanying base prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus supplement and the accompanying base prospectus are only being distributed to, and are only directed at, persons in the United Kingdom that are qualified investors within the meaning of the UK Prospectus Regulation that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated (each such person being referred to as a "relevant person").

This prospectus supplement and the accompanying base prospectus and their contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the common stock being offered under this prospectus supplement by us will be passed upon for us by Troutman Pepper Hamilton Sanders LLP, Philadelphia, Pennsylvania. Jefferies LLC and RBC Capital Markets, LLC are being represented in connection with this offering by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

EXPERTS

Ernst & Young LLP, an independent registered public accounting firm, audited Avalo's consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about Avalo's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), which is incorporated by reference in this prospectus supplement and the accompanying prospectus and elsewhere in the registration statement. Avalo's financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC for the securities we are offering by this prospectus supplement. This prospectus supplement does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information. We will provide to each person, including any beneficial owner, to whom a prospectus supplement is delivered, a copy of any or all of the information that has been incorporated by reference in the prospectus supplement but not delivered with the prospectus supplement.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website at www.sec.gov that contains reports, proxy and information statements and other information regarding registrants. Our SEC filings, including our registration statement and the exhibits and schedules thereto, are available on the SEC website at www.sec.gov.

We maintain a website at www.avalotx.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act with the SEC with respect to the securities being offered pursuant to this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus omit certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities being offered pursuant to this prospectus supplement and the accompanying prospectus. Statements in this prospectus supplement and the accompanying prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Any part of the registration statement, including the documents incorporated by reference or the exhibits, may be accessed on the SEC website as noted in "Where You Can Find More Information." The documents we are incorporating by reference into this prospectus supplement are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2020filed with the SEC on March 8, 2021;
- our Quarterly Report on Form 10-Q for the quarters ended March 31, 2021 and June 30, 2021 filed with the SEC on May 13, 2021 and August 2, 2021, respectively;
- our Current Reports on Form 8-K filed with the SEC on January 5, 2021, January 7, 2021, January 8, 2021, March 1, 2021, March 17, 2021, March 31, 2021, June 8, 2021, June 16, 2021, June 21, 2021, June 23, 2021, July 2, 2021, July 26, 2021, and August 26, 2021 in each case only to the extent the information in such report is filed and not furnished;
- our definitive proxy statement on Schedule 14A, filed with the SEC on April 27, 2021, specifically incorporated by reference into our Annual Report on Form 10-Kand
- the description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on October 9, 2015, including any amendments or reports filed for the purposes of updating this description.

We also incorporate by reference into this prospectus supplement all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, (i) after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus supplement but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Avalo Therapeutics, Inc., 540 Gaither Road, Suite 400, Rockville, Maryland 20850; telephone: (410) 522-8707.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

PROSPECTUS



\$150,000,000 of Common Stock Preferred Stock Debt Securities and/or Warrants

From time to time, we may offer up to \$150,000,000 of any combination of the securities described in this prospectus in one or more offerings. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable anti-dilution provisions.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide you with a prospectus supplement containing specific information about the terms of the securities being offered and the offering. We may also authorize one or more free writing prospectuses to be provided to you in connection with any offering. Any prospectus supplement may also add, update or change information contained in this prospectus. If information in any prospectus supplement or any related free writing prospectus is inconsistent with the information in this prospectus, then the information in that prospectus supplement or any related free writing prospectus will apply and will supersede the information in this prospectus.

We may offer and sell these securities to or through one or more underwriters, dealers or agents, or directly to purchasers, on a continuous or delayed basis. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement with, between or among them will be set forth, or will be calculable from the information set forth, in an accompanying prospectus supplement or any related free writing prospectus. For more detailed information, see "Plan of Distribution" in this prospectus.

Our common stock is traded on The Nasdaq Capital Market under the symbol "CERC." On March 5, 2021, the last reported sale price of our common stock was \$3.10 per share. The applicable prospectus supplement or any related free writing prospectus will contain information, where applicable, as to any other listing on The Nasdaq Capital Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement or any related free writing prospectus.

This prospectus may not be used by us to consummate a sale of securities unless accompanied by the applicable prospectus supplement. You should carefully read this prospectus, any prospectus supplement and any related free writing prospectus, together with additional information described in "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference", before you invest in our securities.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 5 of this prospectus, in any accompanying prospectus supplement, any related free writing prospectus and in the documents incorporated by reference into this prospectus, to read about factors you should consider before investing in our securities.

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

Prospectus dated March 19, 2021

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a shelf registration process. Under this shelf registration process, we may offer shares of our common stock, shares of our preferred stock, debt securities, or warrants for such securities, 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 offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to any offering.

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. Prospectus supplements and any related free writing prospectus may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement or any related free writing prospectus will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and any related free writing prospectus, will include material information relating to the offering. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, the information and documents incorporated herein by reference and the additional information under the heading "Where You Can Find Additional Information" before making an investment decision.

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement or any related free writing prospectus. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus or any prospectus supplement or any related free writing prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus or any prospectus supplement or any related free writing prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find Additional Information."

To the extent there are inconsistencies between this prospectus, any prospectus supplement and any related free writing prospectus and any documents incorporated by reference, the document with the most recent date will control.

This prospectus may not be used to consummate sales of our securities, unless it is accompanied by a prospectus supplement.

PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part. Unless the context indicates otherwise, references in this prospectus to "Cerecor," "Company," "we," "us" and "our" refer to Cerecor Inc.

Company Overview

We are a biopharmaceutical company focused on becoming a leader in development and commercialization of treatments for rare and orphan diseases. The Company is advancing its clinical-stage pipeline of innovative therapies that address unmet patient needs within rare and orphan diseases. The Company's rare disease pipeline includes CERC-801, CERC-802 and CERC-803 ("CERC-800 compounds"), which are in development for therapies for congenital disorders of glycosylation and CERC-006, an oral mTORC1/2 inhibitor in development for the treatment of complex lymphatic malformations. The Company is also developing two monoclonal antibodies, CERC-002 and CERC-007. CERC-002 targets the cytokine LIGHT (TNFSF14) and is in clinical development for the treatment of severe pediatric-onset Crohn's disease and COVID-19 acute respiratory distress syndrome ("ARDS"). CERC-007 targets the cytokine IL-18 and is in clinical development for the treatment of Still's disease (adult onset Still's disease ("AOSD") and systemic juvenile idiopathic arthritis ("sJIA")) and multiple myeloma ("MM"). CERC-006, 801, 802 and 803 have all received Orphan Drug Designation ("ODD") and Rare Pediatric Disease Designation ("RPDD"), which makes all four eligible for a priority review voucher ("PRV") upon approval from the U.S. Food and Drug Administration ("FDA").

The Company continues to explore strategic alternatives for its non-core assets, including its commercialized product, Millipred®, an oral prednisolone indicated across a wide variety of inflammatory conditions, and its neurology pipeline assets.

Our Strategy

Our strategy for increasing stockholder value includes:

- Advancing our pipeline of compounds through development and to regulatory approval;
- Acquiring or licensing rights to targeted, complementary differentiated preclinical and clinical stage compounds;
- Developing the go-to-market strategy to quickly and effectively market, launch, and distribute each of our compounds that receive regulatory approval; and
- Opportunistically out-licensing rights to indications or geographies

Corporate Information

Our principal executive offices are located at 540 Gaither Road, Suite 400, Rockville, Maryland 20850 and our telephone number is (410) 522-8707. Our website address is www.cerecor.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

"Cerecor", the Cerecor logo and other trademarks or service marks of Cerecor Inc. appearing in this prospectus are the property of Cerecor Inc. Our company is a "smaller reporting company" as defined in Rule 12b-2 of the Exchange Act, and we have elected to take advantage of certain of the scaled disclosure available to smaller reporting companies under the Exchange Act.

Offerings Under This Prospectus

We may offer shares of our common stock; shares of our preferred stock; debt securities; or warrants for such securities, with a total value of up to \$150,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to any offering. However, no prospectus supplement nor any related free writing prospectus will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

This prospectus may not be used to consummate a sale of any securities unless it is accompanied by a prospectus supplement.

We may sell the securities directly to investors or to or through agents, underwriters or dealers. We, and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we offer securities through agents or underwriters, we will include in the applicable prospectus supplement or any related free writing prospectus:

- · the names of those agents or underwriters;
- · applicable fees, discounts and commissions to be paid to them;
- · details regarding over-allotment options, if any; and
- · the net proceeds to us.

Common Stock

Under our amended and restated certificate of incorporation, we are authorized to issue up to 200,000,000 shares of common stock, \$0.001 par value per share. As of March 5, 2021 we had 89,104,816 shares of common stock outstanding. Each holder of common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election. Subject to preferences that may be applicable to any then-outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock. Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or stock exchange listing rules), to designate and issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the designations, powers, preferences, privileges and relative participating, optional or special rights and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. As of March 5, 2021, we had 1,257,143 shares of

preferred stock outstanding.

Our board of directors, without stockholder approval, can issue preferred stock with voting, conversion or other rights that could adversely affect the voting power and other rights of the holders of common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of the common stock and may adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation.

Our board of directors will fix the designations, voting powers, preferences and rights of each series, as well as the qualifications, limitations or restrictions thereof, of the preferred stock of each series that we offer under this prospectus and applicable prospectus supplements or any related free writing prospectus in the certificate of designation relating to that series of preferred stock.

Warrants

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities (described below) in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We may enter into warrant agreements with a bank or trust company that we select to be our warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement or any related free writing prospectus relating to a particular series of warrants.

In this prospectus, we have summarized certain general features of warrants. We urge you, however, to read the applicable prospectus supplement and any free writing prospectus related to the particular series of warrants being offered, as well as the warrant agreements and warrant certificates that contain the terms of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement and warrant certificate containing the terms of the warrants we are offering before the issuance of the warrants. As of March 5, 2021, excluding 1,676,923 pre-funded warrants exercisable at \$0.001 per share (the "Pre-Funded Warrants"), we had outstanding 4,002,380 warrants to purchase shares of our common stock at a weighted average exercise price of \$12.50 per share, subject to adjustment upon occurrence of certain conditions, including but not limited to stock dividends and splits, distribution of property, or certain fundamental transactions, and, subject to certain limitations, in some cases for subsequent rights offerings. The Pre-Funded Warrants are exercisable at any time after their original issuance and do not expire.

Debt Securities

We may offer debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. Any subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Any convertible debt securities will be convertible into or exchangeable for our common stock or our other securities. Conversion may be mandatory or at your option or both and would be at prescribed conversion rates.

With respect to any debt securities that we issue, we will issue such debt securities under an indenture, which we would enter into with the trustee named in the indenture. The form of indenture is filed as an exhibit to the registration statement of which this prospectus is a part and is incorporated herein by reference. Any indenture would be qualified under the Trust Indenture Act of 1939, as amended.

Listing

If any securities are to be listed or quoted on a securities exchange or quotation system, the applicable prospectus supplement or any related free writing prospectus will so indicate. Our common stock is listed on The Nasdaq Capital Market and trades under the symbol "CERC."

RISK FACTORS

Investing in our securities involves a high degree of risk. Before purchasing any securities you should consider carefully the risks and uncertainties described in the section entitled "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2020, as filed with SEC on March 8, 2021, which is incorporated in this prospectus by reference in their entirety, as well as in any prospectus supplement or any related free writing prospectus hereto. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. Please refer to the sections entitled "Special Note Regarding Forward-Looking Statements," "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference." In that case, the trading price of our common stock could decline and you might lose all or part of your investment.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus include "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Section 27A of the Securities Act. For these purposes, any statements contained or incorporated by reference herein regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management, other than statements of historical facts, are forward-looking statements. In some cases, you can identify forward-looking statements by the words "may," "might," "can," "will," "to be," "could," "would," "should," "expect," "intend," "plan," "objective," "anticipate," "believe," "estimate," "predict," "project," "potential," "likely," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future, although not all forward-looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. We cannot guarantee that we actually will achieve the plans, intentions or expectations expressed or implied in our forward-looking statements. There are a number of important factors that could cause actual results, levels of activity, performance or events to differ materially from those expressed or implied in the forward-looking statements we make.

You should refer to the "Business," "Risk Factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other sections contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus, for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Given these risks, uncertainties and other factors, many of which are beyond our control, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate, and you should not place undue reliance on these forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all.

Any forward-looking statement speaks only as of the date on which it is made. Although we may elect to update forward-looking statements in the future, we specifically disclaim any obligation to do so, except as may be required by law, even if our estimates change, and readers should not rely on our forward-looking statements as representing our views as of any date subsequent to the date the statements were made.

USE OF PROCEEDS

Unless we otherwise indicate in the applicable prospectus supplement or any free writing prospectus relating to a specific offering, we currently intend to use the net proceeds from the sale of the securities for general corporate purposes.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities 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; or
- at negotiated prices.

We may also sell equity securities covered by this registration statement in an "at the market offering" as defined in Rule 415 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, either:

- on or through the facilities of The Nasdaq Capital Market or any other security exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale: and/or
- other than on The Nasdaq Capital Market or such other securities exchanges or quotation or trading services.

Such at the market offerings, if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- · the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- · any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- · any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, we will describe any commissions we will pay the agent in the prospectus supplement and we will include the net proceeds payable to us. The prospectus supplement will also include any overallotment options. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any underwriters who are qualified market makers on The Nasdaq Capital Market may engage in passive market making transactions in the securities on The Nasdaq Capital Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

DESCRIPTION OF OUR CAPITAL STOCK

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries. This description also summarizes relevant provisions of the General Corporation Law of the State of Delaware, which we refer to as the DGCL. The terms of our amended and restated certificate of incorporation and amended and restated bylaws and the terms of the DGCL are more detailed than the general information provided below. Therefore, please carefully consider the actual provisions of these documents, which have been filed with the SEC as exhibits to the registration statement of which this prospectus forms a part, and the DGCL.

General

Under our amended and restated certificate of incorporation, we are authorized to issue up to 200,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share, of which 2,857,143 shares were designated as our Series B Non-Voting Convertible Preferred Stock (discussed below) and the remainder of which shares of preferred stock are undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of March 5, 2021 we had 89,104,816 shares of common stock outstanding and 1,257,143 shares of preferred stock outstanding.

Common Stock

Voting

Each holder of common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are fully paid and nonassessable.

Warrants

As of March 5, 2021, excluding 1,676,923 pre-funded warrants exercisable at \$0.001 per share, we had outstanding 4,002,380 warrants to purchase shares of our common stock at a weighted average exercise price of \$12.50 per share,

subject to adjustment upon occurrence of certain conditions, including but not limited to stock dividends and splits, distribution of property, or certain fundamental transactions, and in some cases for subsequent rights offerings. The Pre-Funded Warrants are exercisable at any time after their original issuance and do not expire. The Pre-Funded Warrants cannot be exercised if such exercise would cause (i) the aggregate number of shares of our common stock beneficially owned by the holder (together with its affiliates and certain related persons) to exceed 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, or (ii) the combined voting power of our securities beneficially owned by the holder (together with its affiliates) to exceed 9.99% of the combined voting power of all of our securities then outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. However, any holder may increase or decrease such percentage, but not in excess of 19.99%, upon at least 61 days' prior notice from the holder to us. Upon certain fundamental transactions (as defined in the Pre-Funded Warrants), the holders of the Pre-Funded Warrants will be entitled to receive upon exercise of the Pre-Funded Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Pre-Funded Warrants immediately prior to such fundamental transaction without regard to any limitations on exercise contained in the Pre-Funded Warrants.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or stock exchange listing rules), to designate and issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the designations, powers, preferences, privileges and relative participating, optional or special rights and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors, without stockholder approval, can issue preferred stock with voting, conversion or other rights that could adversely affect the voting power and other rights of the holders of common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of the common stock and may adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments upon liquidation.

Our board of directors will fix the designations, voting powers, preferences and rights of each series, as well as the qualifications, limitations or restrictions thereof, of the preferred stock of each series that we offer under this prospectus and applicable prospectus supplements or any related free writing prospectus in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- · the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- · whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- · whether the preferred stock will be convertible into our common stock or other securities of ours, including

depositary shares and warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted:

- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;
- · voting rights, if any, of the preferred stock;
- preemption rights, if any;
- · restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special U.S. federal income tax considerations applicable to the preferred stock;
- · the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

The DGCL, the corporate law of our state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our certificate of incorporation if the amendment would change the par value or, unless the certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Convertible Preferred Stock

On December 26, 2018, we filed a Certificate of Designation of Preferences of Series B Non-Voting Convertible Preferred Stock (the "convertible preferred stock") (the "Certificate of Designation") classifying and designating the rights, preferences and privileges of the convertible preferred stock. The Certificate of Designation authorized 2,857,143 shares of convertible preferred stock. The convertible preferred stock converts to shares of common stock on a 1-for-5 ratio and has the same rights, preferences, and privileges as common stock other than it holds no voting rights. As of March 5, 2021, we had 1,257,143 shares of convertible preferred stock outstanding.

Anti-Takeover Effects of Delaware Law and Our Charter and Bylaws

Provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult to acquire us by means of a tender offer, a proxy contest, open market purchases, removal of incumbent directors and otherwise. These provisions, summarized below, are expected to discourage types of coercive takeover practices and inadequate takeover bids and to encourage persons to acquire control of us to first negotiate with us. We believe that the benefits of increase protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Law

We are subject to section 203 of the DGCL, or Section 203. Section 203 generally prohibits a public Delaware corporation 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:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder.
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to

- determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- · any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- · subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

Subject to certain exceptions, Section 203 defines an "interested stockholder" as an entity or person (other than the corporation or any direct or indirect majority-owned subsidiary of the corporation) who, together with the entity or person's affiliates and associates, beneficially owns, or is an affiliate or associate of the corporation and within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

The existence of this provision generally will have an anti-takeover effect for transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);
- · provide that the authorized number of directors may be changed only be resolution of our board of directors;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose); and
- provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officers or by our board of directors pursuant to a
 resolution adopted by a majority of the total number of authorized directors.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the holders of at least 66 2/3% of our then outstanding common stock.

Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the exclusive forum for:

- · any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty;
- any action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; or
- · any action asserting a claim against us that is governed by the internal affairs doctrine.

The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in such action. These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act, Securities Act or any other claim for which the federal courts have exclusive or concurrent jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. Our exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our shareholders will not be deemed to have waived our compliance with these laws, rules and regulations.

The provisions of the DGCL, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Nasdaq Capital Market Listing

Our common stock is listed on The Nasdaq Capital Market under the symbol "CERC."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, NY 11219. The transfer agent and registrar for any series of preferred stock will be set forth in each applicable prospectus supplement.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplement or related free writing prospectus, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement or related free writing prospectus will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We have filed forms of the warrant agreements as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the title of such securities;
- the offering price or prices and aggregate number of warrants offered;
- the currency or currencies for which the warrants may be purchased;
- if applicable, the designation and terms of the securities and the exercise price with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- · if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special U.S. federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of any debt securities that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future debt securities we offer, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we may offer under a prospectus supplement may differ from the terms described below. For any debt securities that we offer, an indenture (and any relevant supplemental indenture), if required, will contain additional important terms and provisions, the form of which we filed as an exhibit to the Registration Statement of which this prospectus is a part and is incorporated therein by reference. We will file any definitive indenture as an exhibit to reports that we file with the SEC and incorporate by reference in this prospectus and the applicable prospectus supplement. Any indenture would be qualified under the Trust Indenture Act of 1939, as amended.

With respect to any debt securities that we issue, we will describe in each prospectus supplement the following terms relating to a series of debt securities:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- · whether or not we will issue the series of debt securities in global form, and if so, the terms and who the depository will be;
- · the maturity date;
- the principal amount due at maturity;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- · whether or not the debt securities will be convertible into shares of our common stock or our preferred stock and, if so, the terms of such conversion;
- · whether or not the debt securities will be secured or unsecured by some or all of our assets, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- · restrictions on transfer, sale or other assignment, if any;
- · our right, if any, to defer payment or interest and the maximum length of any such deferral period;
- the date, if any, after which and the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- · whether the indenture will restrict our ability to pay dividends, or will require us to maintain any asset ratios or reserves;
- · whether we will be restricted from incurring any additional indebtedness, issuing additional securities, or entering into a merger, consolidation or sale of our business;
- a discussion of any material or special U.S. federal income tax considerations applicable to the debt securities;
- · information describing any book-entry features;
- any provisions for payment of additional amounts for taxes;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000

and any integral multiple thereof;

- events of default;
- whether we and/or the indenture trustee may change an indenture without the consent of any holders;
- the form of debt security and how it may be exchanged and transferred;
- · description of the indenture trustee and paying agent, and the method of payments; and
- any other specified terms, preferences, rights or limitations of, or restrictions on, the debt securities and any terms that may be required by us or advisable under applicable laws or regulations.

We summarize below the material terms of the form of indenture, if required, or indicate which material terms will be described in the applicable prospectus supplement. The indenture:

- · does not limit the amount of debt securities that we may issue;
- allows us to issue debt securities in one or more series;
- · does not require us to issue all of the debt securities of a series at the same time;
- · allows us to reopen a series to issue additional debt securities without the consent of the holders of the debt securities of such series; and
- · provides that the debt securities may be secured or unsecured, as may be set forth in the applicable prospectus supplement.

LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon for us by Troutman Pepper Hamilton Sanders LLP. If legal matters in connection with offerings made pursuant to this prospectus are passed upon by counsel for underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement relating to such offerings.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website atwww.sec.gov that contains reports, proxy and information statements and other information regarding registrants. Our SEC filings, including our registration statement and the exhibits and schedules thereto, are available on the SEC website at www.sec.gov.

We maintain a website at www.cerecor.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-37590. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this document:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as filed with the SEC on March 8, 2021;
- our Current Reports on Form 8-K filed with the SEC on January 5, 2021, January 7, 2021, January 8, 2021 and March 1, 2021, in each case only to the extent the information in such report is filed and not furnished; and
- the description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on October 9, 2015, including any amendments or reports filed for the purposes of updating this description.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration

statement of which this prospectus forms a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Cerecor Inc., 540 Gaither Road, Suite 400 Rockville, Maryland 20850; telephone: (410) 522-8707.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

Shares



Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-Running Managers

Jefferies RBC Capital Markets

, 2021