

Chief Executive Officer

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Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

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If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934.

Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company
		(Do not check if a smaller reporting company)	

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CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (1)(2)(3)	Proposed maximum offering price per Unit(3)	Aggregate maximum offering price (3)(4)(5)	Amount of registration fee (3)
Common Stock, \$0.001 par value per share				
Preferred Stock, \$0.001 par value per share				
Warrants				
Debt Securities(6)				
Units(7)				
Total	\$ 30,000,000.00			\$ 3,021.00(8)

(1) Also includes an indeterminate aggregate principal amount and number of securities of each identified class of securities (except for debt securities which will not exceed \$10,000,000.00) up to a proposed aggregate offering price of \$30,000,000.00, which may be offered by the registrant from time to time in unspecified numbers and at indeterminate prices, and as may be issued upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including under any applicable anti-dilution provisions. Except as provided in Rule 426(b) under Securities Act of 1933, in no event will the aggregate offering price of all types of securities (except for debt securities which will not exceed \$10,000,000.00) issued by the Registrant pursuant to this registration statement exceed \$30,000,000.00.

(2) Pursuant to Rule 416 under the Securities Act of 1933, this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or similar transaction.

(3) Pursuant to General Instruction II.C. of Form S-3, the table lists each of the classes of securities being registered and the aggregate proceeds to be raised, but does not specify by each class information as to the amount to be registered, proposed maximum offering price per unit, and proposed maximum aggregate offering price.

(4) The proposed maximum aggregate offering price has been estimated solely to calculate the registration fee in accordance with Rule 457(o) under the Securities Act of 1933.

(5) Includes consideration to be received by the Registrant, if applicable, for registered securities that are issuable upon exercise, conversion or exchange of other registered securities.

(6) In no case shall the aggregate amount of debt securities exceed \$10,000,000.00.

(7) Consisting of some or all of the securities listed above, in any combination, including shares of common stock, shares of preferred stock, warrants and debt securities and Units consisting of share of common stock, shares of preferred stock, warrants and debt securities or a combination thereof.

(8) Previously paid.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Subject To Completion, Dated July 22, 2016

Prospectus

\$30,000,000.00

Common Stock

Preferred Stock

Warrants

Debt Securities

Units

From time to time, we may offer up to \$30,000,000.00 of our common stock, preferred stock, warrants to purchase common stock or preferred stock, debt securities (which will not exceed \$10,000,000.00) and/or units consisting of common stock, preferred stock, warrants and debt securities or any combination of these securities, in one or more transactions.

We will provide specific terms of these offerings and securities in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement, and any documents incorporated by reference, may also add, update or change information contained in this prospectus. You should read this prospectus, the applicable prospectus supplement, any documents incorporated by reference and any related free writing prospectus carefully before buying any of the securities being offered.

We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis.

Our common stock is listed on the NASDAQ Capital Market (“NASDAQ”) under the symbol “KOOL.” The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, of the securities covered by the applicable prospectus supplement. The aggregate market value of our outstanding common stock held by non-affiliates was approximately \$8,047,000 based on 3,008,883 shares of outstanding common stock, of which 779,872 shares are held by affiliates, and a price of \$3.61 per share, which was the last reported sale price of our common stock as quoted on NASDAQ on May 19, 2016. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED 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.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION (“SEC”) NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is July 22, 2016.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus and in any prospectus supplement we may file constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934 as amended (the “Exchange Act”). These statements relate to future events concerning our business and to our future revenues, operating results and financial condition. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “forecast,” “predict,” “propose,” “potential” or “continue,” or the negative of those other comparable terminology.

Any forward looking statements contained in this prospectus or any prospectus supplement are only estimates or predictions of future events based on information currently available to our management and management’s current beliefs about the potential outcome of future events. Whether these future events will occur as management anticipates, whether we will achieve our business objectives, and whether our revenues, operating results or financial condition will improve in future periods are subject to numerous risks. There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include those that we discuss under the heading “Risk Factors” and in other sections of our Annual Report on Form 10-K for the year ended June 30, 2015, our Quarterly Reports on Form 10-Q for the quarterly periods ended September 30, 2015, December 31, 2015 and March 31, 2016, all filed with the SEC, as well as in our Current Reports filed on Form 8-K from time to time with the SEC, that are incorporated by reference into this prospectus. You should read these factors and the other cautionary statements made in this prospectus and in the documents we incorporate by reference into this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus or the documents we incorporate by reference into this prospectus. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

ABOUT THIS PROSPECTUS

This document is called a prospectus and is part of a registration statement that we have filed with the SEC, using a “shelf” registration process. Under this shelf registration process, we may, from time to time, offer shares of our common stock, preferred stock, warrants to purchase common stock or preferred stock, debt securities and/or units consisting of common stock, preferred stock, warrants and debt securities or any combination of these securities, in one or more transactions and in amounts we will determine from time to time, up to a total dollar amount of \$30,000,000.00.

This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities described in this prospectus, we will provide a prospectus supplement or information that is incorporated by reference into this prospectus, containing more specific information about the terms of the securities that we are offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings and securities. This prospectus, together with applicable prospectus supplements, any information incorporated by reference and any related free writing prospectuses, includes all material information relating to these offerings and securities. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus, including without limitation, a discussion of any risk factors or other special considerations that apply to these offerings or securities or the specific plan of distribution. If there is any inconsistency between the information in this prospectus and a prospectus supplement or information incorporated by reference having a later date, you should rely on the information in that prospectus supplement or incorporated information having a later date. We urge you to read carefully this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading "Where You Can Find Additional Information," before buying any of the securities being offered.

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You should rely only on the information we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus.

Neither the delivery of this prospectus nor any sale made under it implies that there has been no change in our affairs or that the information in this prospectus is correct as of any date after the date of this prospectus. You should assume that the information in this prospectus, any applicable 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 by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing 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 “Where You Can Find Additional Information.” **THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES, UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.**

In this prospectus, unless the context otherwise requires, references to “we,” “us,” “our” or similar terms, as well as references to “Cesca” or the “Company,” refer to Cesca Therapeutics Inc., its subsidiaries and predecessors.

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ABOUT CESCA THERAPEUTICS INC.

Overview

Cesca Therapeutics develops and markets integrated cellular therapies and delivery systems that advance the safe and effective practice of regenerative medicine. The Company is a leader in the development and manufacture of automated blood and bone marrow processing systems that enable the separation, processing and preservation of cell and tissue therapy products. The Company was founded in 1986 and is headquartered in Rancho Cordova, California. Cesca's strategy is to continue to enhance the performance and competitiveness of its flagship product lines in the cord blood banking arena while expanding into significant new growth opportunity areas in point of care therapeutics. The Company is developing a number of offerings for the delivery of autologous cell therapies that address significant unmet medical needs and expects to partner with other pioneers in the stem cell arena to accelerate clinical evaluations, expedite regulatory approvals and penetrate the market.

On February 18, 2014, TotipotentRX Corporation ("TotipotentRX," "Totipotent" or "TRX"), merged with and into ThermoGenesis Corp ("ThermoGenesis"). TRX was a cellular therapeutics development organization with a pipeline of human point-of-care experimental therapies in early stage clinical studies using bone marrow and blood derived cells and growth factors. The merged company was renamed Cesca Therapeutics Inc. and is now positioned as a fully integrated regenerative medicine company with the ability to research, design and develop the devices, disposables and protocols necessary to facilitate the delivery of cell therapies at the point of care. Cesca remains a corporation organized under the laws of the State of Delaware and, unless otherwise noted, any information regarding us and our business includes information relating to TotipotentRX.

In September 2015, Cesca undertook a restructuring initiative to reduce the costs associated with its traditional cord blood banking products. The restructuring resulted in a reduction of approximately 15 positions in various functions. This action, combined with the elimination of a number of open positions that will not be back-filled, is expected to reduce annual operating costs primarily related to cord blood banking products by approximately \$3.3 million. The Company incurred a restructuring charge of approximately \$190,000 during the three months ended September 30, 2015, recorded as a component of general and administrative expense.

Stem Cell Therapies

Cesca Therapeutics has nine cell therapies at various stages of clinical development but all with human data. These include critical limb ischemia, acute myocardial infarction, non-healing ulcers, ischemic stroke, spinal fusion, osteoarthritis, non-union fractures and avascular necrosis. The Company also has an active bone marrow

transplantation program. The current emphasis is in three particular areas, as follows:

Critical Limb Ischemia (“CLI”) – Cesca received FDA approval on June 12, 2015 for an Investigational Device Exemption (“IDE”) for its pivotal clinical trial (the “CLIRST III” study) to evaluate the Company’s SurgWerks™- CLI System for the treatment of patients with late-stage (Rutherford 5), no option, critical limb ischemia. CLI is the last progressive phase of peripheral artery disease, where the leg is so deprived of blood flow and oxygen, that it has visible signs of gangrenous ulceration. The Company has supported or completed two prior feasibility studies in CLI, one delivering a Cesca platform prepared autologous bone marrow cell dose into the afflicted leg artery of 13 human subjects and other delivering a similar Cesca platform produced cell dose into the afflicted limb muscles of 17 human subjects.

On May 31, 2016, the Company submitted an IDE supplement to the CLIRST III study to the FDA. In the supplement, the Company proposed Transcutaneous Oxygen Pressure (TcPO₂) as a surrogate endpoint which is a non-invasive, clinically, accepted method for measuring the amount of oxygen diffused from capillaries through the skin, and reflects both the oxygen supply and the metabolic demand in a specific region. The supplement also details changes to the protocol that are expected to improve both patient enrollment and study flow. These include expanding the cohort to include both “no option” and “poor option” CLI patients, removing unnecessary patient testing requirements, improving the mapping and injection procedure, and eliminating the Blinded Independent Review Committee for enrollment and endpoint analysis. The supplement also expands the number of secondary endpoints and extends the follow-up period beyond an observational phase to facilitate collection of additional data in support of reimbursement from The Centers for Medicare and Medicaid Services.

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Acute Myocardial Infarction (“AMI”) – The SurgWerks™ AMI System has been designed to facilitate an adjunct treatment for patients who have suffered an acute ST-elevated myocardial infarction (“STEMI”), a particular and most threatening type of heart attack. Therapies delivered using the SurgWerks-AMI system are intended to minimize the adverse remodeling of the heart post-STEMI. The entire four-step bedside treatment is designed to take less than 120 minutes to complete, in a single surgical procedure, in the heart catheterization laboratory of a hospital.

Bone Marrow Transplant (“BMT”) – Cesca has two initiatives within its BMT program: development of the CellWerks™ technology platform for clinical and intra-laboratory use, and the delivery of BMT laboratory services through the Company’s TotipotentRX subsidiary in India. The CellWerks Platform is designed for optimal laboratory preparation of hematopoietic stem cells used in BMT and bio-banking. The technology platform includes a “smart vision” control module, a corresponding disposable for processing blood and bone marrow sourced tissue and sample tracking software enabling GMP compliance. Cell analytics for laboratory and point-of-care use are under development and will complete the CellWerks offering. TotipotentRX laboratory services, a collaboration with Fortis Healthcare, are aimed at serving the Indian clinical market for cell therapy under good tissue practices compliance.

Products

Cesca’s product offerings include:

The SurgWerks™ System (in development) – a proprietary system comprised of the SurgWerks Processing Platform, including devices and analytics, and indication-specific SurgWerks Procedure Kits for use in regenerative stem cell therapy at the point-of-care for vascular and orthopedic diseases.

The CellWerks™ System (in development) – a proprietary cell processing system with associated analytics for intra-laboratory preparation of adult stem cells from bone marrow or blood.

The AutoXpress® System (“AXP”) – a proprietary automated device and companion sterile disposable for concentrating hematopoietic stem cells from cord blood.

The MarrowXpress™ System – a derivative product of the AXP and its accompanying sterile disposable for the isolation and concentration of hematopoietic stem cells from bone marrow.

The BioArchive® System – an automated cryogenic device used by cord blood banks for the cryopreservation and storage of cord blood stem cell concentrate for future use.

Manual Disposables – non-AXP bag sets for use in the processing and cryogenic storage of cord blood. They can be stored in the automated BioArchive device or in conventional dewars.

Our business strategy involves:

A focus on insufficiently met medical needs: our initial focus is on ischemic cardiovascular indications (CLI and AMI) with oncology and orthopedic protocols to follow.

A unique point-of-care approach: our CLI and AMI cell therapies require a single visit to the operating room for a treatment lasting only 90-120 minutes.

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Delivery of a fully integrated offering: Cesca delivers all the hardware, software and disposable components necessary for the aspiration and processing of bone marrow and the separation and concentration of a therapeutic dose of stem cells for re-injection into the patient at the point of care.

The use of autologous, bone marrow derived stem cells: Cesca's protocols are potentially safer because the donor and the recipient of the stem cell preparation is the same individual.

A highly resource efficient operating model: Cesca leverages its India-based clinical research organization embedded within the Fortis network of hospitals for a highly cost-effective approach to feasibility studies and early stage clinical trials.

Multiple shots on goal: Cesca has nine protocols at various stages of clinical development.

Patent protection: Cesca has over 30 issued patents globally with several more applications in the pipeline.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act, with respect to the securities covered by this prospectus. This prospectus, which is a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information with respect to us and the securities covered by this prospectus, please see the registration statement and the exhibits filed with the registration statement. A copy of the registration statement and the exhibits filed with the registration statement may be inspected without charge at the Public Reference Room maintained by the SEC, located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC also maintains an Internet website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is <http://www.sec.gov>.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, we file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available for inspection and copying at the Public Reference Room and website of the SEC referred to above. We maintain a website at <http://www.cescatherapeutics.com>. You may access our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and amendments to those reports filed pursuant to Sections 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and certain information that we will later file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below, as well as any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of the initial registration statement and prior to the effectiveness of this registration statement, and any filings made after the date of this prospectus until we sell all of the securities under this prospectus, except that we do not incorporate any document or portion of a document that was furnished and deemed by the rules of the SEC not to have been filed:

Our Annual Report on Form 10-K for the fiscal year ended June 30, 2015, filed with the SEC on September 17, 2015 and as amended on September 24, 2015;

Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed with the SEC on November 16, 2015; Quarterly Report on Form 10-Q for the quarter ended December 31, 2015, filed with the SEC on February 16, 2016; and Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, filed with the SEC on May 13, 2016;

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Our Current Reports on Form 8-K filed with the SEC on September 1, 2015, September 15, 2015, September 29, 2015, September 30, 2015, October 16, 2015, October 28, 2015, November 5, 2015, December 16, 2015, February 3, 2016, February 4, 2016, February 16, 2016, March 1, 2016, March 2, 2016, March 4, 2016, March 10, 2016, March 21, 2016, June 20, 2016 and July 12, 2016;

Our definitive proxy statement on Schedule 14A filed on January 14, 2016 for our annual meeting of stockholders held on March 2, 2016; and

The description of our common stock set forth in Item 1 of our Registration Statement on Form 8-A filed on November 17, 1987 pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

Additionally, all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after (i) the date of the initial registration statement and prior to effectiveness of the registration statement; and (ii) the date of this prospectus and prior to the termination or completion of this offering, shall be deemed to be incorporated by reference in this prospectus and to be part hereof from the date of filing of such reports and other documents. Any information that we subsequently file with the SEC that is incorporated by reference as described above will automatically update and supersede any previous information that is part of this prospectus.

We hereby undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the information that has been or may be incorporated by reference in this prospectus, other than exhibits to such documents. Requests for such copies should be directed to our Assistant Corporate Secretary at 2711 Citrus Road, Rancho Cordova, California 95742, Telephone (916) 858-5100.

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RISK FACTORS

Investing in our securities involves significant risks. You should review carefully the risks and uncertainties described under the heading “Risk Factors” contained in, or incorporated into, the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference herein or therein. Each of the referenced risks and uncertainties could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

DESCRIPTION OF SECURITIES WE MAY OFFER

We may offer, from time to time, shares of our common stock, shares of our preferred stock, warrants to purchase common stock or preferred stock, debt securities or units to purchase shares of common stock, preferred stock, warrants, debt securities or a combination of these securities, under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. See “Description of Capital Stock,” “Description of Warrants,” “Description of Debt Securities” and “Description of Units” below. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate principal amount or aggregate offering price;

rates and times of payment of interest or dividends, if any;

redemption, conversion or sinking fund terms,
if any;

voting or other rights, if any;

conversion prices, if any; and

important federal income tax considerations.

The prospectus supplement and any related free writing prospectus also may supplement, or, as applicable, add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

The terms of any particular offering, the initial offering price and the net proceeds to us will be contained in the prospectus supplement, information incorporated by reference or free writing prospectus relating to such offering.

DESCRIPTION OF CAPITAL STOCK

The description below of our capital stock and provisions of our amended and restated certificate of incorporation (our “Certificate of Incorporation”) and bylaws (our “Bylaws”) are summaries and are qualified by reference to our Certificate of Incorporation and Bylaws. These documents are filed as exhibits to the registration statement of which this prospectus is a part.

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Our Certificate of Incorporation authorizes the issuance of up to 350,000,000 shares of common stock, par value \$0.001 per share, and 2,000,000 shares of preferred stock, par value \$0.001 per share. The rights and preferences of the preferred stock may be established from time to time by our board of directors.

Common Stock

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, except matters that relate only to one or more of the series of preferred stock, and each holder 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, if they so choose. According to our Bylaws, all matters are decided by the vote of a majority in voting interest of the shareholders present in person or by proxy and voting at any meeting of the shareholders during which a quorum is present, except as otherwise provided in the Certificate of Incorporation, in the Bylaws or by law.

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those 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 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 outstanding shares of preferred stock.

Holders of common stock have no preemptive or conversion rights or other subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are, and the shares of common stock offered by us in this offering, when issued and paid for, will be fully paid and nonassessable. 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 which we may designate in the future.

Preferred Stock

Under the terms of our amended and restated articles of incorporation, the board of directors is authorized, subject to any limitations prescribed by law, without stockholder approval, to issue such shares of preferred stock in one or more series. Each such series of preferred stock shall have such rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be determined by the board of directors.

The purpose of authorizing the board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of our outstanding voting stock.

The effects of issuing preferred stock could include one or more of the following:

decreasing the amount of earnings and assets available for distribution to holders of common stock;

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

delaying, deferring or preventing changes in our control or management.

As of the date of this prospectus, there are no shares of preferred stock outstanding.

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Effect of Certain Provisions of our Certificate of Incorporation and Bylaws and the Delaware Anti-Takeover Statute

Certificate of Incorporation and Bylaws

Some provisions of Delaware law and our Certificate of Incorporation and Bylaws contain provisions that could make the following transactions more difficult:

acquisition of us by means of a tender offer;

acquisition of us by means of a proxy contest or otherwise; or

removal of our incumbent officers and directors.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings. Our Bylaws provide that a special meeting of stockholders may be called only by the board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals. Our Bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of the board of directors.

Board of Directors Vacancies. Under our Bylaws, any vacancy on the board of directors, including a vacancy resulting from an enlargement of the board of directors, may be filled by vote of a majority of the remaining directors. The shareholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by

the directors.

Board of Directors Size. Under our Bylaws, the board of directors has the power to set the size of the board. The ability to increase or decrease the size of the board in conjunction with the other provisions above could make it more difficult for a third party to acquire control of the Company.

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Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law (“DGCL”). This law prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

prior to the date of the transaction, 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 number of shares outstanding those shares owned by persons who are directors and also officers and by 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

on or subsequent to the date of the transaction, 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 two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines “business combination” to include:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition of 10% or more of our assets involving the interested stockholder;

in general, any transaction that results in the issuance or transfer by us of any of our stock to 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.

In general, Section 203 of the DGCL defines an “interested stockholder” as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or

controlled by the entity or person.

Limitation of Liability

The DGCL permits Delaware corporations to eliminate or limit the monetary liability of directors for breach of their fiduciary duty of care, subject to limitations. Our Certificate of Incorporation provides that our directors shall not be liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption or limitation thereof is not permitted under the DGCL as the same exists or may hereafter be amended.

The DGCL provides for indemnification of directors, officers, employees and agents, subject to limitations. Both our Certificate of Incorporation and Bylaws provide for the indemnification of our directors, officers, employees and agents to the fullest extent permitted by Delaware law. Our directors and officers also are insured against certain liabilities for actions taken in such capacities, including liabilities under the Securities Act.

Section 145(a) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, if such person had no cause to believe the conduct was unlawful.

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Section 145(b) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted under similar standards to those set forth above, except that no indemnification may be made in respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which such action or suit was brought shall determine that despite the adjudication of liability, but in view of all the circumstances of the case, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Section 145 of the DGCL further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsection (a) and (b) or in the defense of any claim, issue or matter therein, such person shall be indemnified against expenses actually and reasonably incurred by such person in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the corporation may purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against such officer or director and incurred by such person in any such capacity or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liabilities under Section 145.

As permitted by Section 102(b)(7) of the DGCL, our Certificate of Incorporation provides that none of our directors shall be liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director. However, this provision does not eliminate or limit the liability of a director for acts or omissions not in good faith or for breaching such person's duty of loyalty, engaging in intentional misconduct or knowingly violating the law, paying a dividend or approving a stock repurchase which was illegal, or obtaining an improper personal benefit. A provision of this type has no effect on the availability of equitable remedies, such as injunction or rescission, for breach of fiduciary duty.

We have a policy of directors' liability insurance that insures the directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances.

We believe that the foregoing policies and provisions of our Certificate of Incorporation and Bylaws are necessary to attract and retain qualified officers and directors. Insofar as indemnification for liabilities arising under the Securities Act may be permitted with respect to our directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Listing

Our common stock is listed on the NASDAQ under the symbol “KOOL.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Investor Services, LLC, 350 Indiana Street, Suite 750, Golden, CO 80401.

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DESCRIPTION OF WARRANTS

General

We may issue warrants to purchase common stock or preferred stock. We may issue the warrants independently or together with any underlying securities, and the warrants may be attached or separate from the underlying securities. We may also issue a series of warrants under a separate warrant agreement to be entered into between us and a warrant agent. The warrant agent will act solely as our agent in connection with the warrants of such series and will not assume any obligation or relationship of agency for or with holders or beneficial owners of warrants.

The following description is a summary of selected provisions relating to the warrants that we may issue. The summary is not complete. When warrants are offered in the future, a prospectus supplement, information incorporated by reference or a free writing prospectus, as applicable, will explain the particular terms of those securities and the extent to which these general provisions may apply. The specific terms of the warrants as described in a prospectus supplement, information incorporated by reference, or free writing prospectus will supplement and, if applicable, may modify or replace the general terms described in this section.

This summary and any description of warrants in the applicable prospectus supplement, information incorporated by reference or free writing prospectus is subject to and is qualified in its entirety by reference to all the provisions of any specific warrant document or agreement. We will file each of these documents, as applicable, with the SEC and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of warrants. See “Where You Can Find Additional Information” and “Incorporation of Information by Reference” above for information on how to obtain a copy of a warrant document when it is filed.

When we refer to a series of warrants, we mean all warrants issued as part of the same series under the applicable warrant agreement.

Terms

The applicable prospectus supplement, information incorporated by reference or free writing prospectus, may describe the terms of any warrants that we may offer, including, but not limited to, the following:

the title of the warrants;

the total number of warrants;

the price or prices at which the warrants will be issued;

the price or prices at which the warrants may be exercised;

the currency or currencies that investors may use to pay for the warrants;

the date on which the right to exercise the warrants will commence and the date on which the right will expire;

whether the warrants will be issued in registered form or bearer form;

information with respect to book-entry procedures, if any;

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if applicable, the minimum or maximum amount of warrants that may be exercised at any one time;

if applicable, the designation and terms of the underlying securities with which the warrants are issued and the number of warrants issued with each underlying security;

if applicable, the date on and after which the warrants and the related underlying securities will be separately transferable;

if applicable, a discussion of material United States federal income tax considerations;

if applicable, the terms of redemption of the warrants;

the identity of the warrant agent, if any;

the procedures and conditions relating to the exercise of the warrants; and

any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Warrant Agreement

We may issue the warrants in one or more series under one or more warrant agreements, each to be entered into between us and a bank, trust company or other financial institution as warrant agent. We may add, replace or terminate warrant agents from time to time. We may also choose to act as our own warrant agent or may choose one of our subsidiaries to do so.

The warrant agent under a warrant agreement will act solely as our agent in connection with the warrants issued under that agreement. Any holder of warrants may, without the consent of any other person, enforce by appropriate legal action, on its own behalf, its right to exercise those warrants in accordance with their terms.

Form, Exchange and Transfer

We may issue the warrants in registered form or bearer form. Warrants issued in registered form, *i.e.*, book-entry form, will be represented by a global security registered in the name of a depository, which will be the holder of all the warrants represented by the global security. Those investors who own beneficial interests in a global warrant will do so through participants in the depository's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depository and its participants. In addition, we may issue warrants in non-global form, *i.e.*, bearer form. If any warrants are issued in non-global form, warrant certificates may be exchanged for new warrant certificates of different denominations, and holders may exchange, transfer or exercise their warrants at the warrant agent's office or any other office indicated in the applicable prospectus supplement, information incorporated by reference or free writing prospectus.

Prior to the exercise of their warrants, holders of warrants exercisable for shares of common stock or preferred stock will not have any rights of holders of common stock or preferred stock purchasable upon such exercise and will not be entitled to dividend payments, if any, or voting rights of the common stock or preferred stock purchasable upon such exercise.

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Exercise of Warrants

A warrant will entitle the holder to purchase for cash an amount of securities at an exercise price that will be stated in, or that will be determinable as described in, the applicable prospectus supplement, information incorporated by reference or free writing prospectus. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the applicable offering material. After the close of business on the expiration date, unexercised warrants will become void. Warrants may be redeemed as set forth in the applicable offering material.

Warrants may be exercised as set forth in the applicable offering material. Upon receipt of 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 offering material, we will forward, as soon as practicable, the securities purchasable upon such exercise. If less than all of the warrants represented by such warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

DESCRIPTION OF DEBT SECURITIES

General

We may issue debt securities which may or may not be converted into shares of common stock. In connection with the issuance of any debt securities, we do not intend to issue them pursuant to a trust indenture to the extent such issuance without an indenture is exempt under the terms of the Trust Indenture Act of 1939 (“Trust Indenture Act”). However, if a trust indenture is requested by a placement agent, underwriter or broker-dealer as a condition of the financing or otherwise required pursuant to an exemption under the Trust Indenture Act, we will provide and enter into a trust indenture. If a trust indenture is entered into, we do not intend to register the trust indenture under the Trust Indenture pursuant to an applicable exemption. Under Section 304(a)(9) of the Trust Indenture Act, the Trust Indenture Act does not apply to any security which is to be issued under an indenture which limits the aggregate principal amount of securities at any time outstanding thereunder to \$10,000,000.00. We do not intend to issue debt securities, if any, pursuant to a trust indenture that will exceed \$10,000,000.00. If a trust indenture is entered into, we will file the trust indenture as an exhibit on Form 8-K before making any offer of debt securities.

The following description is a summary of selected provisions relating to the debt securities that we may issue. The summary is not complete. When debt securities are offered in the future, a prospectus supplement, information incorporated by reference or a free writing prospectus, as applicable, will explain the particular terms of those securities and the extent to which these general provisions may apply. The specific terms of the debt securities as described in a prospectus supplement, information incorporated by reference, or free writing prospectus will

supplement and, if applicable, may modify or replace the general terms described in this section.

This summary and any description of debt securities in the applicable prospectus supplement, information incorporated by reference or free writing prospectus is subject to and is qualified in its entirety by reference to all the provisions of any specific debt securities document or agreement. We will file each of these documents, as applicable, with the SEC and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of warrants. See “Where You Can Find Additional Information” and “Incorporation of Information by Reference” above for information on how to obtain a copy of a warrant document when it is filed.

The indenture agent under an indenture agreement, if any, will act solely as our agent in connection with the debt securities issued under that agreement. Any holder of debt securities may, without the consent of any other person, enforce by appropriate legal action, on its own behalf, its right to exercise those debt securities in accordance with their terms. When we refer to a series of debt securities, we mean all debt securities issued as part of the same series under the applicable indenture.

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Terms

The applicable prospectus supplement, information incorporated by reference or free writing prospectus, may describe the terms of any debt securities that we may offer, including, but not limited to, the following:

the title of the debt securities;

the total amount of the debt securities;

the amount or amounts of the debt securities will be issued and interest rate;

the conversion price at which the debt securities may be converted;

the date on which the right to exercise the debt securities will commence and the date on which the right will expire;

if applicable, the minimum or maximum amount of debt securities that may be exercise at any one time;

if applicable, the designation and terms of the underlying securities with which the debt securities are issued and the amount of debt securities issued with each underlying security;

if applicable, a discussion of material United States federal income tax consideration;

if applicable, the terms of the payoff of the debt securities;

the identity of the indenture agent, if any;

the procedures and conditions relating to the exercise of the debt securities; and

any other terms of the debt securities, including terms, procedure and limitation relating to the exchange or exercise of the debt securities.

Form, Exchange and Transfer

We may issue the debt securities in registered form or bearer form. Debt securities issued in registered form, *i.e.*, book-entry form, will be represented by a global security registered in the name of a depository, which will be the holder of all the debt securities represented by the global security. Those investors who own beneficial interests in a global debt securities will do so through participants in the depository's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depository and its participants. In addition, we may issue debt securities in non-global form, *i.e.*, bearer form. If any debt securities are issued in non-global form, debt securities certificates may be exchanged for new debt securities certificates of different denominations, and holders may exchange, transfer or exercise their debt securities at the indenture agent's office, if any, or any other office indicated in the applicable prospectus supplement, information incorporated by reference or free writing prospectus.

Prior to the exercise of their debt securities, holders of debt securities exercisable for shares of common stock or preferred will not have any rights of holders of common stock or preferred stock and will not be entitled to dividend payments, if any, or voting rights of the shares of common stock or preferred stock.

Conversion of Debt Securities

A debt security may entitle the holder to purchase in exchange for the extinguishment of debt an amount of securities at an exercise price that will be stated in the debt security. Debt securities may be converted at any time up to the close of business on the expiration date set forth in the terms of such debt security. After the close of business on the expiration date, debt securities not exercised will be paid in accordance with their terms.

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Debt securities may be converted as set forth in the applicable offering material. Upon receipt of a notice of conversion properly completed and duly executed at the corporate trust office of the indenture agent, if any, or to us, we will forward, as soon as practicable, the securities purchasable upon such exercise. If less than all of the debt security represented by such security is converted, a new debt security will be issued for the remaining debt security.

DESCRIPTION OF UNITS

We may issue units composed of any combination of our common stock, preferred stock, warrants and debt securities. We will issue each unit so that the holder of the unit is also the holder of each security included in the unit. As a result, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The following description is a summary of selected provisions relating to units that we may offer. The summary is not complete. When units are offered in the future, a prospectus supplement, information incorporated by reference or a free writing prospectus, as applicable, will explain the particular terms of those securities and the extent to which these general provisions may apply. The specific terms of the units as described in a prospectus supplement, information incorporated by reference, or free writing prospectus will supplement and, if applicable, may modify or replace the general terms described in this section.

This summary and any description of units in the applicable prospectus supplement, information incorporated by reference or free writing prospectus is subject to and is qualified in its entirety by reference to the unit agreement, collateral arrangements and depositary arrangements, if applicable. We will file each of these documents, as applicable, with the SEC and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of units. See “Where You Can Find Additional Information” and “Incorporation of Information by Reference” above for information on how to obtain a copy of a document when it is filed.

The applicable prospectus supplement, information incorporated by reference or free writing prospectus may describe:

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities composing the units;

whether the units will be issued in fully registered or global form; and

any other terms of the units.

The applicable provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Warrants” and “Description of Debt Securities” above, will apply to each unit and to each security included in each unit, respectively.

USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, information incorporated by reference or free writing prospectus, we intend to use the net proceeds from the sale of securities to fund our growth plans, for working capital, and for other general corporate purposes, including capital expenditures related to our growth. We may also use a portion of the net proceeds to acquire or invest in businesses whom, from time to time, we engage and explore the possibility of strategic partnering or investment.

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PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus from time to time in one or more transactions, including, without limitation:

through agents;

to or through underwriters;

through broker-dealers (acting as agent or principal);

directly by us to purchasers (including our affiliates and stockholders), through a specific bidding or auction process, a rights offering or otherwise;

through a combination of any such methods of sale; or

through any other methods described in a prospectus supplement.

The distribution of securities may be effected, from time to time, in one or more transactions, including:

block transactions (which may involve crosses) and transactions on the Nasdaq or any other organized market where the securities may be traded;

purchases by a broker-dealer as principal and resale by the broker-dealer for its own account pursuant to a prospectus supplement;

ordinary brokerage transactions and transactions in which a broker-dealer solicits purchasers;

sales “at the market” to or through a market maker or into an existing trading market, on an exchange or otherwise; and

sales in other ways not involving market makers or established trading markets, including direct sales to purchasers.

The securities may be sold at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices. The consideration may be cash or another form negotiated by the parties. Agents, underwriters or broker-dealers may be paid compensation for offering and selling the securities. That compensation may be in the form of discounts, concessions or commissions to be received from us or from the purchasers of the securities. Dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and compensation received by them on resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act. If such dealers or agents were deemed to be underwriters, they may be subject to statutory liabilities under the Securities Act.

We may also make direct sales through subscription rights distributed to our existing stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to our stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell our securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities that we offer.

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Agents may, from time to time, solicit offers to purchase the securities. If required, we will name in the applicable prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, any agent involved in the offer or sale of the securities and set forth any compensation payable to the agent. Unless otherwise indicated, any agent will be acting on a best efforts basis for the period of its appointment. Any agent selling the securities covered by this prospectus may be deemed to be an underwriter of the securities.

If underwriters are used in an offering, securities will be acquired by the underwriters for their own account and may be resold, from time to time, in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale, or under delayed delivery contracts or other contractual commitments. Securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. If an underwriter or underwriters are used in the sale of securities, an underwriting agreement will be executed with the underwriter or underwriters at the time an agreement for the sale is reached. The applicable prospectus supplement will set forth the managing underwriter or underwriters, as well as any other underwriter or underwriters, with respect to a particular underwritten offering of securities, and will set forth the terms of the transactions, including compensation of the underwriters and dealers and the public offering price, if applicable. This prospectus, the applicable prospectus supplement and any applicable free writing prospectus will be used by the underwriters to resell the securities.

If a dealer is used in the sale of the securities, we, or an underwriter, will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. To the extent required, we will set forth in the prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, the name of the dealer and the terms of the transactions.

We may directly solicit offers to purchase the securities and may make sales of securities directly to institutional investors or others. These persons may be deemed to be underwriters with respect to any resale of the securities. To the extent required, the prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, will describe the terms of any such sales, including the terms of any bidding or auction process, if used.

Agents, underwriters and dealers may be entitled under agreements which may be entered into with us to indemnification by us against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. If required, the prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, will describe the terms and conditions of such indemnification or contribution. Some of the agents, underwriters or dealers, or their affiliates may be customers of, engage in transactions with or perform services for us or our subsidiaries or affiliates in the ordinary course of business.

Under the securities laws of some states, the securities offered by this prospectus may be sold in those states only through registered or licensed brokers or dealers.

Any person participating in the distribution of common stock registered under the registration statement that includes this prospectus will be subject to applicable provisions of the Exchange Act, and the applicable SEC rules and regulations, including, among others, Regulation M, which may limit the timing of purchases and sales of any of our common stock by any such person. Furthermore, Regulation M may restrict the ability of any person engaged in the distribution of our common stock to engage in market-making activities with respect to our common stock. These restrictions may affect the marketability of our common stock and the ability of any person or entity to engage in market-making activities with respect to our common stock.

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Certain persons participating in an offering may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act that stabilize, maintain or otherwise affect the price of the offered securities. If any such activities will occur, they will be described in the applicable prospectus supplement.

In compliance with the guidelines of the Financial Industry Regulatory Authority (“FINRA”), the aggregate maximum discount, commission or agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of any offering pursuant to this prospectus and any applicable prospectus supplement, as the case may be.

If more than 10% of the net proceeds of any offering of securities made under this prospectus will be received by FINRA members participating in the offering or affiliates or associated persons of such FINRA members, the offering will be conducted in accordance with FINRA Conduct Rule 5110(h).

So long as the aggregate market value of our voting and non-voting common equity held by non-affiliates is less than \$75,000,000.00 and so long as required by the rules of the SEC, the amount of securities we may offer hereunder will be limited such that the aggregate market value of securities sold by us during a period of 12 calendar months cannot exceed one-third of the aggregate market value of the voting and non-voting common equity held by non-affiliates.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution.

LEGAL MATTERS

Dorsey & Whitney LLP will pass upon legal matters in connection with the validity of the securities offered hereby for us.

EXPERTS

The consolidated financial statements of the Company appearing in our Annual Report on Form 10-K for the year ended June 30, 2015 have been audited by Marcum LLP, independent registered public accounting firm, as set forth in

their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The consolidated financial statements of the Company for the year ended June 30, 2014 appearing in our Annual Report on Form 10-K for the year ended June 30, 2015 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The estimated expenses payable by the Registrant in connection with the issuance and distribution of the securities being registered are as follows:

SEC Registration Fee	\$ 3,021
Legal Fees and Expenses*	10,000
Accounting Fees and Expenses*	30,000
<u>Miscellaneous Fees and Expenses*</u>	5,000
TOTAL:	\$ 48,021

*Estimated solely for the purposes of this Item. Actual expenses may vary.

Item 15. Indemnification of Directors and Officers

We are incorporated under the laws of the State of Delaware. Section 145 (“Section 145”) of the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (the “DGCL”), *inter alia*, provides that a Delaware corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent to the Company. The DGCL provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise. Article VI of our Bylaws provides for indemnification by us of our directors and officers, as well as persons serving at our request as a director, officer, employee or other agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, to the fullest extent permitted by the DGCL.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payments of dividends or unlawful stock repurchases or redemptions); or (iv) for any transaction from which the director derived an improper personal benefit. Our Certificate of Incorporation provides for such limitation of liability to the fullest extent permitted by DGCL.

As permitted by Delaware law, we have entered into indemnification agreements with each of our directors and officers. These indemnification agreements require us, among other things, to indemnify our directors and officers for certain expenses related to their service to us, including attorneys' fees and other costs and expenses, judgments, fines, penalties and settlement amounts reasonably incurred by or on behalf of such persons, subject to certain limitations.

In addition, our directors and officers are covered under directors' and officers' liability insurance policies maintained by us, subject to the limits of the policies, insuring such persons against various liabilities.

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Item 16. Exhibits and Financial Statement Schedules.

Exhibits.
 The
 following
 exhibits are
 (a) included
 herein or
 incorporated
 herein by
 reference:

Exhibit No.	Document Description	Reference
1.1	Form of Underwriting Agreement with respect to Common Stock	*
1.2	Form of Underwriting Agreement with respect to Preferred Stock	*
1.3	Form of Underwriting Agreement with respect to Warrants	*
1.3	Form of Underwriting Agreement with respect to Units	*
4.1	Form of Specimen Common	*

	Stock Certificate	
4.2	Form of Specimen Preferred Stock Certificate	*
4.3	Form of Warrant Agreement (including Form of Warrant Certificate) with respect to Warrants to purchase Common Stock	*
4.4	Form of Warrant Agreement (including Form of Warrant Certificate) with respect to Warrants to purchase Units	*
5.1	Opinion	Filed herewith
23.1	Consent of Marcum LLP, Independent Registered Public Accounting Firm	Filed herewith.
23.2	Consent of Ernst & Young LLP, Independent Registered Public Accounting	Filed herewith.

Firm

23.3 Consent of
Dorsey & Whitney LLP Contained in Exhibit 5.1

24.1 Powers of Attorney **

* To be filed as an amendment or as an exhibit to a document filed under the Exchange Act and incorporated by reference into this registration statement.

** Previously filed

Item 17. Undertakings

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933.

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(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement.

Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) above do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

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(ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness.

Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities.

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) The undersigned Registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(d) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

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(e) The undersigned Registrant hereby undertakes that, for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rancho Cordova, State of California, on the 22 day of July, 2016.

**CESCA
THERAPEUTICS INC.**

By: /s/ Robin C. Stracey
Robin C. Stracey
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Dated: July 22, 2016 By: /s/ Robin C. Stracey
Robin C. Stracey, Chief Executive Officer and Director
(Principal Executive Officer)

Dated: July 22, 2016 By: /s/ Michael Bruch
Michael Bruch, Chief Financial Officer
(Principal Financial and Accounting Officer)

Dated: July 22, 2016 By: *
Craig W. Moore, Director

Dated: July 22, 2016 By: *
Mahendra Rao, Director

Dated: July 22, 2016 By: *
Denis Michael Rhein, Director

Dated: July 22, 2016 By: *
Xiaochun Xu, Director

* By: /s/ Robin C. Stracey

Robin C. Stracey,
Attorney-in-Fact
July 22, 2016