

CESCA THERAPEUTICS INC.

Form 424B5

June 12, 2014

The information in this preliminary prospectus supplement and the accompanying prospectus 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 prospectus are not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state or jurisdiction where the offer or sale is not permitted.

Subject To Completion, Dated June 12, 2014

Preliminary Prospectus Supplement Filed pursuant to Rule 424(b)(5)

(To Prospectus Dated June 4, 2014) File No. 333-196148

_____ Units Consisting of
_____ shares of Common Stock and
Warrants to Purchase _____ shares of Common Stock

We are offering _____ shares of our common stock, par value \$0.001 per share (“Common Stock”), and warrants (“Warrants”) to purchase up to _____ shares of our Common Stock at an exercise price of \$____ per share of Common Stock. The Common Stock and Warrants will be sold in units (“Units”), with each Unit consisting of one share of Common Stock and a Warrant to purchase 0.____ shares of Common Stock. Each unit will be sold at a price of \$____ per Unit. The shares of Common Stock and Warrants comprising the Units are immediately separable and will be issued separately but can only be purchased together as a Unit in this offering. The Warrants will be exercisable by the holders _____ after the date of the closing of the offering and will expire on the _____ anniversary of the closing of the offering. The shares of Common Stock issuable from time to time pursuant to the exercise of the Warrants are also being offered pursuant to this prospectus supplement and the accompanying base prospectus.

Our shares of Common Stock are listed on the NASDAQ Capital Market under the symbol “KOOL”. On June 12, 2014, the last reported sale price for a share of our Common Stock on the NASDAQ Capital Market was \$____. There is no established public trading market for the Warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Warrants on any national securities exchange.

The aggregate market value of our outstanding shares of Common Stock held by non-affiliates was approximately \$47,877,000 based on 32,641,379 shares of Common Stock outstanding of which 9,400,096 shares of Common Stock were held by non-affiliates, and a per share price of \$2.06 based on the closing sale price of a share of our Common Stock on April 24, 2014. We have sold no 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 supplement.

Investing in our securities involves a high degree of risk. Before making an investment decision, please read “Risk Factors” beginning on page S-3 of this prospectus supplement and any other risk factor included in our base prospectus and in the documents incorporated by reference into this prospectus supplement and base prospectus.

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

| | | |
|--------|---------------|--------------|
| Price | Underwriting | Proceeds to |
| to | Discounts and | Cesca |
| Public | Commissions | Therapeutics |

| | | Inc. ⁽¹⁾ |
|----------|----|---------------------|
| Per Unit | \$ | \$ |
| Total | \$ | \$ |

(1) Before estimated expenses related to this offering of \$244,600.

Sole Book Running Manager

Maxim Group LLC

The date of this prospectus supplement is June __, 2014.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is part of a registration statement that we filed with the Securities and Exchange Commission (“SEC”) utilizing a “shelf” registration process. Under this shelf registration statement process, we may from time to time offer to sell up to \$50,000,000 of our shares of common stock, shares of preferred stock, warrants to purchase common shares, debt securities (not to exceed \$10,000,000) and units consisting of shares of common stock, shares of preferred stock, warrants or debt securities or any combination of these securities in one or more transactions.

We provide information to you about this offering of our Common Stock and Warrants in two separate documents that are bound together: (1) this prospectus supplement, which describes the specific details regarding this offering of shares of Common Stock and Warrants; and (2) the accompanying base prospectus dated June 4, 2014, included in our registration statement on Form S-3 (SEC File No. 333-196148), which provides general information regarding our shares of common stock, shares of preferred stock, warrants to purchase shares of common stock or preferred stock, debt securities and units consisting of shares of common stock, shares of preferred stock, warrants or debt securities or any combination of these securities and other information some of which may not apply to this offering. If information in this prospectus supplement is inconsistent with the accompanying base prospectus, you should rely on this prospectus supplement. However, 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 this prospectus supplement, the statement in the document having the later date modifies or supersedes the earlier statement as our business, financial condition, results of operations and prospects may have changed since the earlier dates.

You should read this prospectus supplement, together with the accompanying base prospectus, the documents incorporated by reference in this prospectus supplement and the base prospectus and any free writing prospectus that we have authorized for use in connection with this offering before making an investment decision. You should also read and consider the information in the documents referred to in the sections of this prospectus supplement and the accompanying base prospectus entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference”. When we refer to this “prospectus”, we are referring to both this prospectus supplement and the base prospectus combined.

You should rely only on the information contained or incorporated by reference in this prospectus supplement or in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and Maxim Group LLC has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it.

We are not making an offer to sell the securities covered by this prospectus supplement in any jurisdiction in which an offer or solicitation is not permitted or in which the person making the offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

The information appearing in this prospectus supplement, the documents incorporated by reference in this prospectus supplement, and in any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of its respective date, regardless of the time of delivery of the respective document or of any sale of securities covered by this prospectus. You should not assume that the information contained in or incorporated by reference in this prospectus supplement or in any free writing prospectus that we have authorized for use in connection with this offering, is accurate as of any date other than the respective dates thereof.

In this prospectus supplement, “we”, “us”, “our”, “the company”, and “Cesca” refer to Cesca Therapeutics Inc. and its subsidiaries, unless the context otherwise requires.

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PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and information appearing elsewhere in this prospectus supplement and in the documents we incorporate by reference in this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before investing in our securities. After you read this summary, to fully understand our company and this offering and its consequences to you, you should read this entire prospectus supplement and any related free writing prospectus carefully, including the information referred to under the heading “Risk Factors” in this prospectus supplement beginning on page S-3, and any related free writing prospectus, as well as the other documents that we incorporate by reference into this prospectus supplement, including our financial statements and the exhibits to the registration statement of which this prospectus supplement is a part.

On February 18, 2014, TotipotentRX Corporation merged with and into ThermoGenesis Corp. In connection with the merger, ThermoGenesis changed its name from ThermoGenesis Corp. to Cesca Therapeutics Inc. As a result of the merger, Cesca is a fully integrated regenerative medicine company with the ability and expertise to research, design, and develop devices and disposables necessary to facilitate, or integrate into the design of clinical protocols and applications directed at cell therapies at the point of care, managing both risk of regulatory approval, and channel distribution. Cesca has the ability to develop new products, devices and disposables, and support existing products, while directing new development of products and services to clinical trials.

Our business strategy includes:

Practical, Commercializable Cell Therapies. To deliver proprietary, commercially viable, highly effective autologous (patient’s own cells) cell therapies to treat major diseases within the existing healthcare delivery system.

Ability to Rapidly and Cost-Effectively Implement New Clinical Trials. To have the ability to rapidly initiate early clinical development of new cell therapies at its U.S. FDA-registered clinical research organization in India and generate high quality data at a fraction of the cost of clinical trials undertaken in the United States or Europe.

Positioned to Commercialize in Both Developed and Emerging Markets. To utilize our existing U.S. and Asian footprints to uniquely position us to meet the needs of patients, hospitals and physicians across the globe. This footprint allows flexibility to meet the variable market demands in service and price.

Proprietary and Protected – To possess an unmatched suite of proprietary technological and clinical assets to be deployed in the regenerative medicine markets. Our cell-therapy-related devices and platform technologies, unique cell formulations and treatment protocols are protected via a broad portfolio of patents and intellectual property filings.

Cesca was founded in 1986, and our principal executive offices are located at 2711 Citrus Road, Rancho Cordova, California 95742. Our telephone number is (916) 858-5100. Our website is located at www.cescatherapeutics.com. Information contained on, or that can be accessed through, our website is not part of this prospectus.

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THE OFFERING

Securities offered by us _____ Units, each consisting of:

One share of Common Stock; and

One Warrant to purchase 0.____ shares of Common Stock at an exercise price of \$__ per share. This prospectus supplement also relates to the offering of the shares of Common Stock issuable upon exercise of the Warrants.

Public Offering Price \$__ per Unit

Shares of Common
Stock outstanding
before this offering 32,657,984 shares

Shares of Common
Stock to be outstanding _____ shares ⁽¹⁾
after this offering

Warrants We will issue Warrants exercisable in the aggregate for _____ shares of Common Stock. The exercise price of each of the Warrants will be \$__ per share. The Warrants will be exercisable by the holders ____ after the date of the closing of the offering and will expire on the ____ anniversary of the closing of the offering.

Use of Proceeds We currently intend to use the net proceeds of this offering for the purposes of funding our stem cell clinical programs including, but not limited to, Critical Limb Ischemia, Acute Myocardial Infarction and Bone Marrow Transplant, and for general corporate purposes and working capital needs. See “Use of Proceeds” on page S-17 of this prospectus supplement.

Risk Factors Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page S-4 of this prospectus supplement for a discussion of factors you should consider carefully when making an investment decision.

KOOL

NASDAQ Symbol There is no established public trading market for the Warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Warrants on the NASDAQ Capital Market or on any other national securities exchange.

Lock- Up Certain of our officers have agreed to a 90-day “lock-up” period from the closing of this offering with respect to any of our securities that they beneficially own, including the issuance of Common Stock upon the exercise of convertible securities and options that are currently outstanding or which may be issued.

⁽¹⁾ The number of shares of Common Stock to be outstanding immediately after this offering as shown above is based on 32,657,984 shares of Common Stock outstanding as of June 12, 2014, and assumes the sale of all Units being offered pursuant to this prospectus supplement. Unless otherwise indicated, the number of shares of Common

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Stock presented in this prospectus supplement excludes (i) 1,253,035 shares of Common Stock issuable upon exercise of stock options outstanding under our stock plans, at a weighted average exercise price of \$ 2.08 per share; (ii) 2,854,420 shares of Common Stock issuable upon exercise of warrants outstanding at a weighted average exercise price of \$ 2.73 per share; (iii) 653,331 unvested shares of restricted stock granted under our equity plans; (iv) 840,642 shares of Common Stock available for future grant or issuance pursuant to our equity incentive plan; and (v) none of the Warrants being offered hereby being exercised.

Except as otherwise indicated herein, this prospectus supplement assumes the sale of the maximum number of Units offered hereunder.

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RISK FACTORS

An investment in our Common Stock is subject to risks inherent to our business. The material risks and uncertainties that management believes affect us are described below. Before making an investment decision, you should carefully consider the risks and uncertainties described below together with all of the other information included or incorporated by reference in this report. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that we are not aware of or focused on or that we currently deem immaterial may also impair our business operations. Due to the recent completion of the merger with TotipotentRX, its significance to us and that we have just begun to integrate its business and operations, our risk factors also relate to TotipotentRX's operations. We also update risk factors from time to time in our periodic reports on Forms 10-K, 10-Q and 8-K which will be incorporated by reference to this prospectus.

If any of the following risks actually occur, our financial condition and results of operations could be materially and adversely affected. If this were to happen, the value of our common stock could decline significantly, and you could lose all or part of your investment.

Risks Related to Our Business

The Market Price of Our Common Stock May Decline As a Result Of the Merger.

We recently merged with TotipotentRX. Our Common Stock may decline as a result of the merger for a number of reasons, including the following:

- we do not achieve the perceived benefits of the merger as rapidly or to the extent anticipated by financial or industry analysts or the investment community; or
- we are unable to obtain additional financing to implement our business plan.

An Inability to Successfully Integrate TotipotentRX's Operations Could Adversely Affect Us.

Our ability to integrate TotipotentRX's business and operations to fulfill our strategy and business plan is dependent on our ability to successfully integrate TotipotentRX's operations. Failure to quickly and adequately integrate TotipotentRX's operations and personnel could adversely affect our business and our ability to achieve our objectives and strategy.

We Will Need to Raise Additional Capital in Furtherance of Our Business Plan.

We will need to raise additional capital in furtherance of our business plan, including the development of new products. Any proposed financing may include shares of common stock, shares of preferred stock, warrants to purchase shares of common stock or preferred stock, debt securities, units consisting of the forgoing securities, equity investments from strategic development partners or some combination of each. Any additional equity financings may be financially dilutive to, and will be dilutive from an ownership perspective to, our stockholders.

We Have Incurred Net Losses For a Significant Period and Losses May Continue.

We have not been profitable since 1994. For the fiscal year ended June 30, 2013, we had a net loss of \$3,086,000 and an accumulated deficit at June 30, 2013, of \$114,191,000. We will continue to incur significant costs as we develop and market our current products and related applications, continue our research and development activities and seek regulatory approval for our product candidates. Although we are executing our business plan to develop, market and launch new products, continuing losses may impair our ability to fully meet our objectives for new product sales.

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Demand For Most Of Our Products Depends On Capital Spending Policies Of Our Customers And On Government Funding Policies.

Our customers include stem cell banks (both private and non-profit), laboratories, universities, healthcare providers, government agencies and public and private research institutions. Many factors, including public policy spending priorities, available resources and product and economic cycles, have a significant effect on the capital spending policies of these entities. These policies in turn can have a significant effect on the demand for our products. Further, the current economic crisis heightens the risk that our customers may lack the funding or credit facilities that they may have previously used for acquiring our products. Such credit or funding restrictions could delay or lower our future revenues.

Lack of demonstrated clinical utility of cord blood derived stem cells beyond hematopoietic transplantation may result in a decline in demand for cord blood banking services, adversely affecting sales of our products.

Transplants using stem cells derived from cord blood and cord tissue have become a standard procedure for treating blood cell lineage disorders, including leukemia, lymphoma and anemia. However, clinical research demonstrating the utility of cord blood stem cells for use in treating other diseases or injury has been minimal, leaving claims of broad clinical utility of cord blood stem cells by cord blood banks largely unsubstantiated. The low utilization rate of banked cord blood samples coupled with the lack of demonstrated clinical results for multiple treatment indications has led to consumer skepticism regarding the benefits of cord blood banking and in turn, a significant reduction in collection rates in a number of geographies in Europe and the United States. A continued lack of investment in the research and development of supporting clinical data for additional applications may lead to greater skepticism globally, further adversely affecting demand for cord blood banking services and revenues to us.

Our Future Revenue Growth is Dependent on our New Products and our Existing Products being Accepted for New Indications or into New Markets.

The acceptance of our products into new markets or for new indications will depend upon the medical community and third-party payers accepting the products as clinically useful, reliable, accurate, and cost effective compared to existing and future products or procedures. Acceptance will also depend on our ability to adequately train technicians on how to use our existing and future products. Even if our products are released for sale, their use may not be recommended by the medical profession or hospitals, unless acceptable reimbursement from healthcare and third-party payers is available. Failure of these products to achieve significant market share could have material adverse effects on our long term business, financial condition, and results of operation.

Outcomes of Pending or Future Clinical Trials or Evaluations May be Negative and the Regenerative Medicine Market May not Expand, or May Not Expand in the Areas Targeted by Our Products.

The marketing and sales of new products may depend on successful clinical trials or evaluation outcomes in the regenerative medicine areas targeted by our products and the approval of regulators. Clinical trials also represent a significant expenditure of resources. Negative clinical trial results in connection with our products or in the areas targeted by it could negatively impact regulatory approval or market acceptance of our products. Unfavorable clinical trials or failure of study results to obtain regulatory approval in a targeted clinical application and/or geographical area even with successful clinical trials, could have material adverse effects on our long-term business, financial condition, and results of operations.

A Significant Portion of Our Revenue is Derived from Customers in Foreign Countries. We May Lose Revenues, Market Share, and Profits Due to Exchange Rate Fluctuations, Political and Economic Changes Related to Our Foreign Business.

For the years ended June 30, 2013 and 2012, sales to customers in foreign countries comprised approximately 55.0% and 43.0%, respectively, of our revenues before the merger. Our foreign business is subject to economic, political and regulatory uncertainties and risks that are unique to each area of the world. Fluctuations in exchange rates may also affect the product prices that our foreign customers are willing to pay, and may put us at a price disadvantage compared to other competitors. Potentially volatile shifts in exchange rates may negatively affect our financial position and results.

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The Loss of a Significant Distributor or End User Customer May Adversely Affect Our Financial Condition and Results of Operations.

Revenues from four significant distributors comprised 56.0% of our revenues for the fiscal year ended June 30, 2013, and a significant portion of our largest distributor's revenue came from one customer. The loss of a large end user customer or distributor may decrease our revenues.

We are Reliant on Highly Specialized Distributors and Regulatory Approval to Market and Sell Our Bone Marrow Processing System.

Although we have added distributors in other territories, we may not be able to expand our sales of in vivo applications utilizing bone marrow processing devices until clinical trials are conducted. Since the MXP, Res-Q, and VXP products are projected as a significant portion of our revenue growth, a delay in finding competent distributors in the clinical space and/or a delay or failure to complete clinical trials and each on-label regulatory approval may adversely affect our future revenues and competitive advantage.

Our Inability to Protect Our Patents, Trademarks, Trade Secrets and Other Proprietary Rights Could Adversely Impact Our Competitive Position.

We believe that our patents, trademarks, trade secrets and other proprietary rights are important to our success and competitive position. Accordingly, we devote substantial resources to the establishment and protection of our patents, trademarks, trade secrets and proprietary rights. If our products are challenged as infringing upon patents of other parties, we may be required to modify the design of the product, obtain a license, or litigate the issues, all of which may have an adverse business effect on us.

We May Be Subject to Claims That Our Products or Processes Infringe the Intellectual Property Rights of Others, Which May Cause Us to Pay Unexpected Litigation Costs or Damages, Modify Our Products or Processes or Prevent Us From Selling Our Products.

Although it is our intention to avoid infringing or otherwise violating the intellectual property rights of others, third parties may nevertheless claim that our processes and products infringe their intellectual property and other rights. We compete with other companies for contracts in some small or specialized industries, which increases the risk that the other companies will develop overlapping technologies leading to an increased possibility that infringement claims will arise. We may be subject to costly and time-consuming legal proceedings, and this could divert management's attention from operating our business. In order to resolve such proceedings, we may need to obtain licenses from these third parties or substantially re-engineer or rename our products in order to avoid infringement. In addition, we may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer or rename our products successfully.

Adverse Results of Legal Proceedings could have a Material Adverse Effect on Us.

We are currently subject to, and may in the future be subject to, a variety of legal proceedings and claims that arise out of the ordinary conduct of business. Results of legal proceedings cannot be predicted with certainty. Irrespective of their merits, legal proceedings may be both lengthy and disruptive to operations and may cause significant expenditure and diversion of management attention. We may be faced with significant monetary damages or injunctive relief against us that could have a material adverse effect on a portion of business operations or a material adverse effect on the financial condition and results of operations.

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We May Not Be Able to Protect Our Intellectual Property In Countries Outside the United States. Intellectual Property Law Outside the United States Is Uncertain and In Many Countries Is Currently Undergoing Review and Revisions.

The laws of some countries do not protect our patent and other intellectual property rights to the same extent as U.S. laws. This is particularly relevant to us as a significant amount of our current and projected future sales are outside of the United States. Third parties may attempt to oppose the issuance of patents to us in foreign countries by initiating opposition proceedings. Opposition proceedings against any of our patent filings in a foreign country could have an adverse effect on our corresponding patents that are issued or pending in the United States. It may be necessary or useful for us to participate in proceedings to determine the validity of our patents or our competitors' patents that have been issued in countries other than the United States. This could result in substantial costs, divert our efforts and attention from other aspects of our business, and could have a material adverse effect on our results of operations and financial condition.

Any Failure to Achieve and Maintain the High Design and Manufacturing Standards That Our Products Require May Seriously Harm Our Business.

Our products require precise, high-quality manufacturing. Achieving precision and quality control requires skill and diligence by our personnel, as well as our vendors. Our failure to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors, design defects or component failures could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously hurt our business. Additionally, the large amount of AXP disposable inventory certain distributors and end-users maintain may delay the identification of a manufacturing error and expand the financial impact. A manufacturing error or defect, or previously undetected design defect, or uncorrected impurity or variation in a raw material component, either unknown or undetected, could affect the product. Despite our very high manufacturing standards, we cannot completely eliminate the risk of errors, defects or failures. If we or our vendors are unable to manufacture our products in accordance with necessary quality standards, our business and results of operations may be negatively affected.

Our Revenues and Operating Results May Be Adversely Affected As A Result of Our Required Compliance With the Adopted European Union Directive On the Restriction Of the Use of Hazardous Substances In Electrical and Electronic Equipment, As Well As Other Standards Around the World.

A number of domestic and foreign jurisdictions seek to restrict the use of various substances, a number of which have been or are currently used in our products or processes. For example, the European Union Restriction of Hazardous Substances in Electrical and Electronic Equipment ("RoHS") Directive now requires that certain substances, which may be found in certain products we have manufactured in the past, be removed from all electronics components. Eliminating such substances from our manufacturing processes requires the expenditure of additional research and development funds to seek alternative substances for our products, as well as increased testing by third parties to ensure the quality of our products and compliance with the RoHS Directive. Other countries, such as China, have enacted or may enact laws or regulations similar to RoHS. While we have implemented a compliance program to ensure our product offering meets these regulations, there may be instances where alternative substances will not be available or commercially feasible, or may only be available from a single source, or may be significantly more expensive than its restricted counterparts. Additionally, if we were found to be non-compliant with any such rule or regulation, we could be subject to fines, penalties and/or restrictions imposed by government agencies that could adversely affect our operating results.

Our Products May Be Subject to Product Recalls Which May Harm Our Reputation and Divert Our Managerial and Financial Resources.

The FDA and similar governmental authorities in other countries have the authority to order the mandatory recall of our products or order their removal from the market if the governmental entity finds our products might cause adverse health consequences or death. The FDA may also seize product or prevent further distribution. A government-mandated or voluntary recall by us could occur as a result of component failures, manufacturing errors or design defects (including labeling defects). In the past we have initiated voluntary recalls of some of our products and we could do so in the future. Any recall of our products may harm our reputation with customers, divert managerial and financial resources and negatively impact our profitability.

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We Are Dependent On Our Suppliers and Manufacturers to Meet Existing Regulations.

Certain of our suppliers and manufacturers are subject to heavy government regulations, including FDA Quality System Regulation (“QSR”) compliance, in the operation of their facilities, products and manufacturing processes. Any adverse action by the FDA against our suppliers or manufacturers could delay supply or manufacture of component products required to be integrated or sold with our products. There are no assurances we will be successful in locating an alternative supplier or manufacturer to meet product shipment or launch deadlines. As a result, our sales, contractual commitments and financial forecasts may be significantly affected by any such delays.

Our Dependence On Suppliers For Disposable Products And Custom Components May Impact Our Production Schedule.

We obtain certain disposable products and custom components from a limited number of suppliers. If the supplier raises the price or discontinues production, we may have to find another qualified supplier to provide the item or re-engineer the item. In the event that it becomes necessary for us to find another supplier, we need to qualify the quality assurance systems and product quality of that alternative supplier. Any operational issues with re-engineering or the alternative qualified supplier may impact the production schedule, therefore delaying revenues, and this may cause the cost of disposables or key components to increase.

Failure To Meet Certain Financial Covenants Could Decrease AXP Product Revenues.

Under certain license and escrow agreements, if we fail to meet certain financial covenants, other companies may take possession of the escrowed intellectual property and initiate manufacturing of the applicable device and disposables. If this were to occur, our revenues would be negatively impacted.

Failure To Retain Or Hire Key Personnel May Adversely Affect Our Ability to Sustain or Grow Our Business.

Our ability to operate successfully and manage our potential future growth depends significantly upon retaining key research, technical, clinical, regulatory, sales, marketing and managerial personnel. Our future success partially depends upon the continued services of key technical and senior management personnel. Our future success also depends on our continuing ability to attract, retain and motivate highly qualified managerial and technical personnel. The inability to retain or attract qualified personnel could have a significant negative effect upon our efforts and thereby materially harm our business and future financial condition.

Most of Our Operations Are Conducted At A Single Location. Any Disruption At Our Facilities Could Delay Revenues Or Increase Our Expenses.

Our U.S. operations are conducted at a single location although we contract the manufacturing of certain devices, disposables and components. Further, through the TotiPotentRX merger, we have clinical and manufacturing operations in India. We take precautions to safeguard our facilities, through insurance, health and safety protocols, and off-site storage of computer data. However, a natural disaster, such as a fire, flood or earthquake, could cause substantial delays in our operations, damage or destroy our manufacturing equipment or inventory, and cause us to incur additional expenses. The insurance we maintain against fires, floods, and other natural disasters may not be adequate to cover our losses in any particular case.

We have Limited Operating History In the Emerging Regenerative Medicine Industry.

Through the merger with TotipotentRX, we are in the business of research, development and commercialization of autologous cell-based therapeutics for use in the emerging regenerative medicine industry, and therefore, we have a limited operating history in such industry on which to base an evaluation of our business and prospects. We will be

subject to the risks inherent in the operation of a company in an emerging industry such as regulatory setbacks and delays, fluctuations in expenses, competition, and governmental regulation.

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Our Potential Products And Technologies Are In Early Stages Of Development.

The development of new cell therapy combination products (pharmaceutical products) is a highly risky undertaking, and there can be no assurance that any future research and development efforts we may undertake will be successful. Our potential products in cardiovascular, orthopedic and wound care indications will require extensive additional research and development and regulatory approval before any commercial introduction. There can be no assurance that any future research, development and clinical trial efforts will result in viable products or meet efficacy standards.

We Intend To Rely On Third Parties For Certain Functions In Conducting Clinical Trials Of Our Product Candidates.

We rely on third parties for clinical trial activities of our products. In this regard, we have, through our merger with TotipotentRX, entered into an agreement with Fortis Healthcare Limited, a hospital chain networked throughout India and Asia, where we act as an exclusive regenerative medicine service provider to Fortis Healthcare. Pursuant to the arrangement, which expires in May 2016, we receive certain discounts from Fortis Healthcare for clinical and hospital services specific to conducting early clinical trials in their organization. If the agreement is not renewed or is terminated by Fortis, we will have to find other entities or organizations to fulfill Fortis' favorable cost structure thus jeopardizing or delaying development of our products.

We rely on other third parties for various miscellaneous clinical trial activities. Any one of these third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations with us in a timely manner or at all.

Delays In The Commencement Or Completion Of Clinical Testing Of Our Products Could Result In Increased Costs To Us And Delay Our Ability To Generate Revenues.

Delays in the commencement or completion of clinical testing could significantly impact our product development costs. We do not know whether current or planned clinical trials will begin on time or be completed on schedule, if at all. The commencement of clinical trials can be delayed for a variety of reasons, including delays in:

- obtaining regulatory approval to commence a clinical trial;
- reaching agreement on acceptable terms with prospective contract research organizations and clinical trial sites for Phase II and III trials;
- obtaining proper devices for any or all of the combination product candidates;
- obtaining institutional review board approval to conduct a clinical trial at a prospective site; and
- recruiting participants for a clinical trial.

In addition, once a clinical trial has begun, it may be suspended or terminated by us or the FDA or other regulatory authorities due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements;
- inspection of the clinical trial operations or clinical trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;
- failure to achieve certain efficacy and/or safety standards;
- reports of serious adverse events or adverse events, including, but not limited to, death of trial subjects; or
- lack of adequate funding to continue the clinical trial.

Our clinical therapy candidates may produce negative or inconclusive results, and we may decide, or regulators may require, to conduct additional clinical trials or abandon product development programs that we expect to be pursuing.

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We Do Not Have Commercial-Scale Manufacturing Capability And Lack Commercial Manufacturing Experience.

We operate GMP manufacturing facilities for both devices and cellular production; however, they are not of sufficient size for medium to large commercial production of product candidates. We will not have large scale experience in cell-drug formulation or manufacturing, and it will lack the resources and the capability to manufacture any of our product candidates on a clinical or commercial scale. Accordingly, we expect to depend on third-party contract manufacturers for the foreseeable future. Any performance failure on the part of our contract manufacturers could delay clinical development, regulatory approval or commercialization of our current or future products, depriving us of potential product revenues and resulting in additional losses.

We Have Limited Sales, Marketing and Distribution Experience in Pharmaceutical Products.

We have limited experience in the sales, marketing, and distribution of pharmaceutical products. There can be no assurance that we will be able to establish sales, marketing, and distribution capabilities or make arrangements with current collaborators or others to perform such activities or that such efforts will be successful. If we decide to market any of our new products directly, we must either partner, acquire or internally develop a marketing and sales force with technical expertise and with supporting distribution capabilities. The acquisition or development of a sales, marketing and distribution infrastructure would require substantial resources, which may not be available to us or, even if available, divert the attention of our management and key personnel, and have a negative impact on further product development efforts.

We May Seek To Enter Into Collaborative Arrangements To Develop and Commercialize Our Products Which May Not Be Successful.

We may seek to enter into collaborative arrangements to develop and commercialize some of our potential products both in North America and international markets. There can be no assurance that we will be able to negotiate collaborative arrangements on favorable terms or at all or that our current or future collaborative arrangements will be successful.

We May Be Exposed to Liabilities Under the Foreign Corrupt Practices Act and Any Determination That We Violated These Laws Could Have A Material Adverse Effect On Our Business.

We are subject to the Foreign Corrupt Practices Act (the "FCPA") and other laws that prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. persons and issuers as defined by the statute, for the purpose of obtaining or retaining business. It is our policy to implement safeguards to discourage these practices by our employees; however, our existing safeguards and any future improvements may prove to be less than effective and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Violations of the FCPA may result in severe criminal or civil sanctions and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition.

Risks Related to Our Industry

Our Business Is Heavily Regulated, Resulting In Increased Costs of Operations and Delays In Product Sales.

Many of our products require FDA approval or clearance to sell in the U.S. and will require approvals from comparable agencies to sell in foreign countries. These authorizations may limit the U.S. or foreign markets in which our products may be sold. Further, our products must be manufactured under requirements of our quality system for continued CE-Marking so they can continue to be marketed and sold in Europe. These requirements are similar to the QSR of both the FDA and California Department of Public Health. Failure to comply with or inappropriately interpret

these quality system requirements and regulations may subject us to delays in production while we correct deficiencies found by the FDA, the State of California, or our notifying body as a result of any audit of our quality system. If we are found to be out of compliance, we could receive a warning letter or an untitled letter from the FDA or even be temporarily shut down in manufacturing and product sales while the non-conformances are rectified. Also, we may have to recall products and temporarily cease their manufacture and distribution, which would increase our costs and reduce our revenues. The FDA may also invalidate our premarket application (PMA) or 510(k) if appropriate regulations relative to the PMA or 510(k) product are not met. The notified bodies may elect to not renew CE-Mark certification. Any of these events would negatively impact our revenues and costs of operations.

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In addition, the production and marketing of our products and potential products and our ongoing research and development, pre-clinical testing and clinical trial activities are currently subject to extensive regulation and review by numerous governmental authorities in the United States and will face similar regulation and review for overseas approval and sales from governmental authorities outside of the United States. Our products under development must undergo rigorous clinical testing and an extensive regulatory approval process before they can be marketed. This process makes it longer, harder and more costly to bring our potential products to market, and we cannot guarantee that any of our potential products will be approved. If we or our collaboration partners do not comply with applicable regulatory requirements, such violations could result in non-approval, suspensions of regulatory approvals, civil penalties and criminal fines, product seizures and recalls, operating restrictions, injunctions, and criminal prosecution.

We may be subject to a more complex regulatory process since stem cell therapies are relatively new and regulatory agencies have less experience with them than with traditional pharmaceutical products and medical devices. Additionally, we believe that many of our therapies will be subject to the U.S. FDA Office of Combination Products, and there have not been any cellular biological-device combinations approved to date by this office.

Changes In Governmental Regulations May Reduce Demand For Our Products Or Increase Our Expenses.

We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products to meet customer needs created by those regulations. Any significant change in regulations could reduce demand for our products or increase our expenses. For example, many of our instruments are marketed to the industry for enabling new regenerative therapies. Changes in the U.S. FDA's regulation of the devices and products directed at regenerative medicine, and development process for new therapeutic applications could have an adverse effect on the demand for these products.

To Sell In International Markets, We Will Be Subject to Regulation in Foreign Countries.

In cooperation with our distribution partners, we intend to market our current and future products both domestically and in many foreign markets. A number of risks are inherent in international transactions. In order for us to market our products in certain non-U.S. jurisdictions, we need to obtain and maintain required regulatory approvals or clearances and must comply with extensive regulations regarding safety, manufacturing processes and quality. These regulations, including the requirements for approvals or clearances to market, may differ from the FDA regulatory scheme. International sales also may be limited or disrupted by political instability, price controls, trade restrictions and changes in tariffs. Additionally, fluctuations in currency exchange rates may adversely affect demand for our products by increasing the price of our products in the currency of the countries in which the products are sold.

There Can Be No Assurance That We Will Obtain Regulatory Approvals Or Clearances In All Of The Countries Where We Intend To Market Our Products, Or That We Will Not Incur Significant Costs In Obtaining Or Maintaining Foreign Regulatory Approvals Or Clearances, Or That We Will Be Able To Successfully Commercialize Current Or Future Products In Various Foreign Markets.

Delays in receipt of approvals or clearances to market our products in foreign countries, failure to receive such approvals or clearances or the future loss of previously received approvals or clearances could have a substantial negative effect on our results of operations and financial condition.

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To Operate In Foreign Jurisdictions, We Are Subject to Regulation by Non-U.S. Authorities.

As a result of the merger, we have operations in India, and as such are subject to Indian regulatory agencies. A number of risks are inherent in conducting business and clinical operations overseas. In order for us to operate as a majority owned foreign corporation in India, we are subject to financial regulations imposed by the Reserve Bank of India. This includes the rules specific to the capital funding, repatriation of funds and payment of dividends from and to the foreign subsidiaries and from and to us in the United States.

In order for us to manufacture and/or market our services and products in India, we need to obtain and maintain required regulatory approvals or clearances and must comply with extensive regulations regarding safety, manufacturing processes and quality. These regulations, including the requirements for approvals or clearances to market, and/or export may differ from the U.S. FDA regulatory scheme.

In order for us to complete clinical trials, clinical trial services and cell banking in India, and other foreign jurisdictions, we need to obtain and maintain approvals and licenses which comply with extensive regulations of the appropriate regulatory body.

International operations also may be limited or disrupted by political, economic or social instability, price controls, trade restrictions and changes in tariffs as ordered by various governmental agencies. Additionally, fluctuations in currency exchange rates may adversely affect the cost of production for our products by increasing the price of materials and other inputs for our products in the currency of the countries in which the products are sold.

If Our Competitors Develop And Market Products That Are More Effective Than Our Product Candidates Or Obtain Regulatory And Marketing Approval For Similar Products Before We Do, Our Commercial Opportunity May Be Reduced Or Eliminated.

The development and commercialization of new pharmaceutical products which target cardiovascular, orthopedic, chronic dermal wounds and other conditions addressed by our current and future products is competitive, and we will face competition from numerous sources, including major biotechnology and pharmaceutical companies worldwide. Many of our competitors have substantially greater financial and technical resources, and development, production and marketing capabilities than we do. In addition, many of these companies have more experience than we do in pre-clinical testing, clinical trials and manufacturing of compounds, as well as in obtaining FDA and foreign regulatory approvals. As a result, there is a risk that one of the competitors will develop a more effective product for the same indications for which we are developing a product or, alternatively, bring a similar product to market before we can. With regards to the BioArchive and AXP Systems, numerous larger and better-financed medical device manufacturers may choose to enter this market as it develops.

Influence By The Government And Insurance Companies May Adversely Impact Sales Of Our Products.

Our business may be materially affected by continuing efforts by government, third-party payers such as Medicare, Medicaid, and private health insurance plans, to reduce the costs of healthcare. For example, in certain foreign markets the pricing and profit margins of certain healthcare products are subject to government controls. In addition, increasing emphasis on managed care in the United States will continue to place pressure on the pricing of healthcare products. As a result, continuing efforts to contain healthcare costs may result in reduced sales or price reductions for our products. To date, we are not aware of any direct impact on our pricing or product sales due to such efforts by governments to contain healthcare costs, and we do not anticipate any impact in the near future.

Product Liability And Uninsured Risks May Adversely Affect Our Continuing Operations.

We operate in an industry susceptible to significant product liability claims. We may be liable if any of our products cause injury, illness, or death. These claims may be brought by individuals seeking relief or by groups seeking to represent a class. We also may be required to recall certain of our products should they become damaged or if they are defective. We are not aware of any material product liability claims against us. However, product liability claims may be asserted against us in the future based on events we are not aware of at the present time. We maintain a product liability policy for \$3,000,000 and a general liability policy that includes product liability coverage of \$1,000,000 per occurrence and \$2,000,000 per year in the aggregate. However, a product liability claim against us could have a material adverse effect on our business or future financial condition.

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Risks Related to Our Common Stock

Trading Prices For Our Common Stock Have Been, And May Continue To Be, Volatile.

The trading price of our Common Stock has been subject to wide fluctuations and may continue to be volatile in the future. Trading price fluctuations can be caused by a variety of factors, many of which are beyond its control, including, among other things:

- Variations in operating results;
- Our common stock is thinly traded;
- Regulatory actions, such as product recalls;
- Governmental regulatory acts;
- Biological or medical discoveries; and
- Market conditions in our industry and the economy as a whole.

If our revenues or operating results fall below the expectations of securities analysts and investors, the price of our Common Stock would likely decline. In the last few years, the stock market experienced extreme price and volume fluctuations due to the unprecedented turmoil and upheaval of the credit markets and the financial services industry, which have particularly affected the market prices for emerging biotechnology and medical device companies, and has adversely affected the market price of our Common Stock.

Our Common Stock Must Meet the Requirements of the NASDAQ Capital Market Stock Exchange.

The listing standards of NASDAQ Capital Market provide, among other things, that a company's securities may be delisted if the bid price of its stock drops below \$1.00 for a period of 30 consecutive business days. On December 11, 2013, we received notice from the NASDAQ Listing Qualifications Department informing us that we failed to maintain the minimum bid listing requirement and needed to regain compliance with listing requirements or face delisting. Although on January 16, 2014, we received notification from the NASDAQ Listing Qualifications Department that we were back in compliance with the minimum bid listing requirement, no assurance can be given that we will be able to continue to meet the NASDAQ Capital Market listing requirements, including the minimum bid listing requirement.

Delisting from NASDAQ could adversely affect our ability to raise additional financing through the sale of equity securities, could significantly affect the ability of investors to trade our securities and could negatively affect the value and liquidity of our common stock. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest and fewer business development opportunities.

Certain Principal Stockholders Have Significant Influence Over Us.

As a result of the merger with TotiPotentRX, Messrs. Harris and Sivilotti, our President and key employee, respectively, beneficially own approximately 28.0% of our outstanding common stock. As a result, they will be able to exert a significant degree of influence or actual control over our management and affairs and over matters requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of the combined company's assets, and any other significant corporate transaction. Their interests may not always coincide with those of our other stockholders.

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We Are Integrating a Private Company That Has Not Been Subject to the Sarbanes-Oxley Act Of 2002 or the Rules and Regulations of the SEC.

Prior to the February 2014 merger, TotipotentRX was a private company and was not subject to the Sarbanes-Oxley Act of 2002, the rules and regulations of the SEC, or other corporate governance requirements to which public reporting companies may be subject. During the audit of TotipotentRX's financial statements for the year ended December 31, 2012, TotipotentRX's independent auditors determined that a material weakness existed in its internal control over financial reporting as TotipotentRX did not have adequate personnel and information systems in place to prepare financial statements on a timely basis, including accrual accounting, non-routine data processes and estimation processes. As result of the merger, we are required to implement the appropriate internal control processes and procedures over financial accounting and reporting. However, there is a risk that we may incur significant legal, accounting and other expenses to ensure that TotipotentRX meets these requirements. Such requirements include, but are not limited to, that we will be required to report on the effectiveness of our internal control over financial reporting. Implementing the controls and procedures required to comply with the various applicable laws and regulations may place a significant burden on our management and internal resources.

We Have Never Paid Cash Dividends.

We have never paid any cash dividends on our Common Stock and do not intend to pay cash dividends in the future. Instead, we intend to apply earnings, if any, to the expansion and development of our business.

Our Management Will Have Broad Discretion Over The Use Of Any Net Proceeds From This Offering, You May Not Agree With How We Use The Proceeds, And The Proceeds May Not Be Invested Successfully.

Our management will have broad discretion as to the use of any net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of any proceeds from the sale of shares of Common Stock in this offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for us.

You May Experience An Immediate And Substantial Dilution In The Offering Price Of The Common Stock You Purchased In The Offering.

The offering price per share in this offering will exceed the pro forma net tangible book value per share of our outstanding Common Stock prior to this offering. Assuming that an aggregate of _____ shares of Common Stock are sold at a price of \$_____ per share for aggregate gross proceeds of approximately \$_____ and after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of \$_____ per share, representing the difference between the offering price of \$_____ per share and our as adjusted net tangible book value per share of \$_____ as of March 31, 2014 after giving effect to this offering at the assumed offering price. The exercise of outstanding stock options may result in further dilution of your investment. See the section below entitled "Dilution" for a more detailed illustration of the dilution you would incur if you participate in this offering.

Sales Of A Significant Number Of Shares Of Common Stock In The Public Markets, Or The Perception That Such Sales Could Occur, Could Depress The Market Price Of Our Shares Of Common Stock.

Sales of a substantial number of shares of Common Stock in the public markets could depress the market price of our shares of Common Stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our shares of Common Stock would have on the market price of our

shares of Common Stock.

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There Is No Public Market For The Warrants To Purchase Common Stock Being Offered In This Offering.

There is no established public trading market for the Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Warrants on the Nasdaq Capital Market nor any other securities exchange. Without an active market, the liquidity of the Warrants will be limited.

Holders Of Our Warrants Will Have No Rights As A Shareholder Until Such Holders Exercise Their Warrants And Acquire Our Common Stock.

Until you acquire our Common Stock pursuant to the exercise of your Warrants, you will have no rights with respect to the Common Stock underlying such Warrants. Upon exercise of your Warrants, you will be entitled to exercise the rights as a holder of Common Stock only as to matters of which the record date occurs after the exercise date.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents we have filed with the SEC that are incorporated by reference into this prospectus supplement contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Forward-looking statements reflect our current view about future plans, intentions or expectations. These forward-looking statements may be included herein or incorporated by reference in this prospectus supplement and include, in particular, statements about our plans, strategies and prospects and may be identified by terminology such as “may”, “will”, “should”, “expect”, “scheduled”, “plan”, “intend”, “anticipate”, “believe”, “es”, “potential”, or “continue” or the negative of those terms or other comparable terminology. These forward-looking statements are subject to risks, uncertainties and assumptions about us. Although we believe that our plans, intentions and expectations are reasonable, we may not achieve our plans, intentions or expectations.

Important factors that could cause actual results to differ materially from the forward-looking statements we make in this prospectus supplement are set forth in this prospectus supplement under the caption “Risk Factors”, and in the reports we have filed or will file with the SEC and which are incorporated by reference herein, including statements under the caption “Risk Factors” and “Forward-Looking Statements” in such reports. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements in this prospectus supplement under the caption “Risk Factors”, and in the reports we have filed or will file with the SEC and which are incorporated by reference herein, including statements under the caption “Risk Factors” and “Forward-Looking Statements” in such reports, in which we have disclosed the material risks related to our business. These forward-looking statements involve risks and uncertainties, and the cautionary statements identify important factors that could cause actual results to differ materially from those predicted in any forward-looking statements. We undertake no obligation to update any of the forward-looking statements after the date of this prospectus supplement to conform those statements to reflect the occurrence of unanticipated events, except as required by applicable law. You should read this prospectus supplement and the documents incorporated by reference completely and with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

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CAPITALIZATION

The table below sets forth our capitalization as of March 31, 2014.

- on an actual basis; and
- on an as adjusted basis assuming that an aggregate of ___ shares of Common Stock which are part of the Units are sold at a price of \$___ per for aggregate proceeds of \$___ less commission of \$___ and estimated aggregate offering expenses of \$244,600.

| | March 31, 2014 | |
|--|----------------|--|
| | Actual | As Adjusted to reflect proceeds from this offering |
| Debt: | | |
| Current Liabilities | \$5,485,000 | |
| Noncurrent Liabilities | 434,000 | |
| Stockholder Equity: | | |
| Preferred stock, \$0.001 par value; 2,000,000 shares authorized; none outstanding | - | |
| Common stock, \$0.001 par value; 80,000,000 shares authorized; 32,641,379 issued and outstanding and ___ issued and outstanding on a pro forma basis | \$33,000 | |
| Paid in capital in excess of par | 161,152,000 | |
| Accumulated deficit | (119,952,000) | |
| Accumulated other comprehensive income | 1,000 | |
| Total stockholders' equity | \$41,234,000 | |
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USE OF PROCEEDS

Assuming gross proceeds from the sale of _____ Units consisting of shares of Common Stock and Warrants and expenses associated with the offering of sales commissions of \$__ and other expenses of the offering of \$244,600, our estimated net proceeds from the offering will be approximately \$_____. Based on our budget for the 2015 year, we intend to use any net proceeds from the sale of the shares of Common Stock and Warrants under this prospectus supplement for the purposes of funding our stem cell clinical programs including, but not limited to, Critical Limb Ischemia, Acute Myocardial Infarction, and Bone Marrow Transplant. We may also use the proceeds for general corporate purposes and working capital needs.

Although we intend to use the net proceeds of this offering for the foregoing purposes, the planned expenditures may change significantly. As a result, our management will have broad discretion in the allocation of any net proceeds. Pending use of any net proceeds, we may invest any proceeds in a variety of capital preservation instruments, including short-term, investment-grade, interest-bearing instruments.

DILUTION

If you invest in our shares of Common Stock which are part of this offering, you will experience dilution to the extent of the difference between the price per share that you pay in this offering and the adjusted net tangible book value per share of Common Stock immediately after this offering.

Our net tangible book value on March 31, 2014 was \$___ or approximately \$___ per share. Net tangible book value is calculated as 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 of Common Stock outstanding at March 31, 2014.

After giving effect to the net proceeds from the sale of our shares of Common Stock in the aggregate amount of \$_____ in this offering at an offering price of \$___ per share and after deducting estimated offering commissions and expenses payable by us, our as adjusted net tangible book value would have been approximately \$___ or approximately \$___ per share of Common Stock, as of March 31, 2014. This represents an immediate increase in net tangible book value of approximately \$0.___ per share to existing shareholders and an immediate dilution of approximately \$__ per share to investors in this offering. The following table illustrates this calculation on a per share basis.

| | |
|---|----|
| Offering price per share | \$ |
| Net tangible book value per share as of March 31, 2014 | \$ |
| Increase in net tangible book value per share attributable to this offering | \$ |
| As adjusted net tangible book value per share after this offering | \$ |
| Dilution per share to new investors purchasing shares in this offering | \$ |

The table above assumes for illustrative purposes that an aggregate of _____ shares of Common Stock are sold at a price of \$___ per share of Common Stock for aggregate gross proceeds of \$_____ less commissions of \$_____ and expenses of \$244,600. This information is supplied for illustrative purposes only.

The information above is based on 32,657,984 shares of Common Stock outstanding as of June 12, 2014, and does not include the following as of June 12, 2014:

- 1,253,035 shares of Common Stock issuable upon exercise of stock options outstanding under our equity plans at a weighted average exercise price of \$2.08 per share;
- 2,854,420 shares of Common Stock issuable upon exercise of warrants outstanding at a weighted average exercise price of \$2.73 per share; and

- 653,331 unvested shares of restricted stock granted under our equity plans;
 - 840,642 shares of Common Stock available for future grant or issuance pursuant to our stock plans.
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To the extent that any of these options, warrants or common stock are exercised, converted or issued, there may be further dilution to new investors.

MARKET FOR OUR COMMON STOCK

Our common stock, \$0.001 par value, is listed on the NASDAQ Capital Market under the symbol KOOL. The following table sets forth the range of high and low bid prices for the Company's Common Stock for the first three quarters for the fiscal year ending June 30, 2014 and for the past two fiscal years as reported by NASDAQ.

| Fiscal 2014 | High | Low | | | |
|--------------------------|--------|--------|--------------------------|--------|--------|
| First Quarter (Sep. 30) | \$1.53 | \$1.01 | | | |
| Second Quarter (Dec. 31) | \$1.12 | \$0.72 | | | |
| Third Quarter (Mar. 31) | \$2.82 | \$1.05 | | | |
| Fiscal 2013 | High | Low | Fiscal 2012 | High | Low |
| First Quarter (Sep. 30) | \$1.29 | \$0.87 | First Quarter (Sep. 30) | \$2.13 | \$1.20 |
| Second Quarter (Dec. 31) | \$1.01 | \$0.67 | Second Quarter (Dec. 31) | \$1.29 | \$0.71 |
| Third Quarter (Mar. 31) | \$1.00 | \$0.82 | Third Quarter (Mar. 31) | \$1.15 | \$0.70 |
| Fourth Quarter (June 30) | \$1.53 | \$0.77 | Fourth Quarter (June 30) | \$0.95 | \$0.80 |

The Company has not paid cash dividends on its Common Stock and does not intend to pay a cash dividend in the foreseeable future. There were approximately ___ stockholders of record on June __, 2014, (not including street name holders).

DESCRIPTION OF SECURITIES

In this offering, we are offering up to ___ Units, consisting of _____ shares of Common Stock and Warrants to purchase ___ shares of Common Stock. Each Unit consists of one share of Common Stock and a Warrant to purchase 0.____ share of Common Stock at an exercise price of \$____ per share. This prospectus supplement also relates to the offering of _____ shares of Common Stock issuable upon exercise, if any, of the Warrants.

Common Stock

A description of the shares of Common Stock we are offering pursuant to this prospectus supplement is set forth under the heading "Description of Capital Stock", starting on page 4 of the accompanying base prospectus. As of June 12, 2014, we had 32,657,984 shares of Common Stock outstanding.

Warrants

The Warrants offered in this offering will be issued in certificated form. You should review a copy of the form of Warrant which will be filed as an exhibit to a Current Report on Form 8-K filed with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the Warrants. The following is a brief summary of the Warrants and is subject in all respects to the provisions contained in the Warrants.

Exercisability

Holder may exercise the Warrants beginning _____ after the closing of this offering and at any time up to the date that is the _____ anniversary of the closing of the offering. The Warrants will be exercisable, at the option of each holder, in

whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of Common Stock purchased upon such exercise.

The Warrants provide for cashless exercise, at the holder's option, in the event that, any time after the earlier of (i) the one year anniversary of the offering and (ii) the completion of any then-applicable holding period required by Rule 144, a registration statement covering shares of common stock underlying the Warrants is not available for the resale of such shares of common stock underlying the Warrants. In such event, the holder may, in its sole discretion, exercise the warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, elect instead to receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the Warrant.

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Exercise Price

The exercise price per share of Common Stock purchasable upon exercise of the Warrants is \$___ per share of Common Stock being purchased. The exercise price is subject to appropriate adjustment in the event of stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

Fundamental Transactions

If, at any time while the Warrants are outstanding, (1) we consolidate or merge with or into another corporation and we are not the surviving corporation, (2) we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets, (3) any purchase offer, tender offer or exchange offer (whether by us or another individual or entity) is completed pursuant to which holders of our shares of common stock are permitted to sell, tender or exchange their shares of common stock for other securities, cash or property and has been accepted by the holders of 50% or more of our outstanding shares of common stock, (4) we effect any reclassification or recapitalization of our shares of common stock or any compulsory share exchange pursuant to which our shares of common stock are converted into or exchanged for other securities, cash or property, or (5) we consummate a stock or share purchase agreement or other business combination with another person or entity whereby such other person or entity acquires more than 50% of our outstanding shares of common stock, each referred to as a Fundamental Transaction, then upon any subsequent exercise of the Warrants, the holders thereof will have the right to receive the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of shares of Common Stock then issuable upon exercise of the Warrant, and any additional consideration payable as part of the Fundamental Transaction.

Transferability

Subject to applicable securities laws, the Warrants may be transferred at the option of the holders upon surrender of the Warrants to us together with the appropriate instruments of transfer.

Exchange Listing

We do not plan on making an application to list the Warrants on the Nasdaq Capital Market or on any other national securities exchange or nationally recognized trading system.

Rights as a Shareholder

Except as otherwise provided in the Warrants or by virtue of such holder's ownership of shares of our Common Stock, the holders of the Warrants do not have the rights or privileges of holders of our Common Stock, including any voting rights, until they exercise their Warrants.

UNDERWRITING

We have entered into an underwriting agreement with Maxim Group LLC, acting as the sole book-running manager and sole representative for the underwriters named below with respect to the Units subject to this offering. The underwriting agreement provides for the purchase of a specific number of Units by each of the underwriters. Subject to certain conditions, we have agreed to sell to the underwriters, and the underwriters have agreed to purchase, the number of Units provided below:

| Underwriter | Number of Units |
|-------------|-----------------|
|-------------|-----------------|

Maxim Group LLC

Total

The underwriters are offering the Units subject to their acceptance of the Units from us and subject to prior sale. The underwriting agreement provides that the obligations of the underwriters to pay for and accept delivery of the Units offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions.

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Commission and Expenses

The representative of the underwriters has advised us that it proposes to offer the shares to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$___ per share. The underwriters may allow, and certain dealers may re-allow, a discount from the concession not in excess of \$___ per share to certain brokers and dealers. After this offering, the public offering price, concession and reallowance to dealers may be reduced by the representative. No such reduction shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement. The securities are offered by the underwriters as stated herein, subject to receipt and acceptance by them and subject to their right to reject any order in whole or in part.

The following table summarizes the public offering price and the underwriting discounts and commissions on the shares sold by the underwriters in this offering.

| | Per Unit ⁽¹⁾ | Total |
|--|----------------------------|-------|
| Public Offering Price | | |
| Underwriting discounts and commissions | | |

We have agreed to reimburse Maxim Group LLC for certain out-of-pocket expenses incurred by them with respect to this offering. We estimate that expenses payable by us in connection with the offering of our shares of Common Stock, other than the underwriting discounts and commissions and the expense reimbursement referred to above, will be approximately \$164,600.

In addition to the underwriting discount, we have agreed to reimburse the underwriter for actual out-of-pocket expenses, including reasonable fees of counsel, up to an amount equal to \$80,000, subject to compliance with FINRA Rule 5110(f)(2)(D). In the event the engagement of Maxim Group terminates prior to the consummation of this offering, Maxim Group shall be entitled to reimbursement for actual expenses in an amount not to exceed \$50,000.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc., or FINRA, the maximum aggregate discounts, commissions, agency fees or other items constituting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of the aggregate offering price of the securities offered pursuant to this prospectus supplement.

Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act and liabilities arising from breaches of representations and warranties contained in the underwriting agreement, or to contribute to payments that the underwriters may be required to make in respect of those liabilities.

Lock-Up Agreements

Our officers consisting of Dan T. Bessey, Kenneth L. Harris, Matthew T. Plavan and Mitchel Sivilotti have agreed to a 90-day “lock-up” period from the date of the underwriting agreement with respect to any of our securities that they beneficially own, including the issuance of shares of Common Stock upon the exercise of convertible securities and options that are currently outstanding or which may be issued. The terms of the lock-up agreements may be waived by the representative of the underwriters at its discretion, although the representative has no present intention to waive or shorten the lock-up period. In determining whether to waive the terms of the lockup agreements, the representative may base its decision on the reasons for requesting the release, the number of shares for which the release is being requested, and market conditions at the time.

If (i) during the last 17 days of the lock-up period, we issue an earnings release or material news or a material event relating to us occurs, or (ii) prior to the expiration of the lock-up period, we announce that we will release earnings results or we become aware that material news or a material event will occur during the 16-day period beginning on the last day of the lock-up period, the restrictions imposed by the lock-up agreement shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of such material news or material event, as applicable.

We have agreed not to (i) issue, enter into any agreement to issue, or announce the issuance of any Common Stock or securities convertible into or exercisable for Common Stock or (ii) enter into certain variable rate transactions, in each case for a period of 30 trading days from the date of the underwriting agreement.

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Electronic Distribution

A prospectus in electronic format may be made available on websites or through other online services maintained by the one or more underwriters of this offering or by their affiliates. Other than the prospectus in electronic format, the information on the underwriters' website and any information contained in any other website maintained by the underwriters is not part of this prospectus supplement or the registration statement of which this prospectus supplement forms a part, has not been approved and/or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Price Stabilization, Short Positions and Penalty Bids

In connection with the offering the underwriters may engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

- Syndicate covering transactions involve purchases of shares of Common Stock in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the common shares originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our shares of 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. Neither we nor 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. In addition, neither we nor the underwriters make any representations that the underwriters will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

We are not listing the Warrants on the Nasdaq Capital Market or an exchange of any trading system and we do not expect that a market for the Warrants will develop.

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EXPENSES

The following are the estimated expense of the issuance and distribution of the Units consisting of Common Stock and Warrants in this offering, other than the underwriting discount, all of which will be paid by us.

| | | |
|--|-----------|---|
| SEC registration fee | \$ 1,600 | * |
| FINRA filing fee | 2,000 | * |
| Nasdaq Capital Market additional listing fee | -- | |
| Legal fees and expenses | 140,000 | |
| Accounting fees and expenses | 70,000 | |
| Miscellaneous | 31,000 | |
| Total | \$244,600 | |

*The SEC registration fee of \$6,440 and the FINRA filing fee of \$8,000 covering all of the securities being offered under the registration statement on Form S-3 (File No. 333-196148) file with the SEC with an effective date of June 4, 2014, of which this prospectus supplement forms part, was previously paid. We allocate the cost of these fees on an approximately pro-rata basis with each offering.

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by Weintraub Tobin Chediak Coleman Grodin Law Corporation, San Francisco, California. Maxim Group LLC is being represented in connection with this offering by Ellenoff Grossman & Schole LLP, New York City, New York.

EXPERTS

The consolidated financial statements of Cesca Therapeutics Inc. (formerly ThermoGenesis Corp.) appearing in Cesca Therapeutics Inc.'s (formerly ThermoGenesis Corp.'s) Annual Report (Form 10-K) for the year ended June 30, 2013 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.

The consolidated financial statements of MK Alliance, Inc. as of and for the years ended December 31, 2012 and 2011, appearing in Cesca Therapeutics Inc.'s Form 8-K filed with the SEC on February 25, 2014, have been audited by Ernst & Young LLP, independent auditors, 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.

INCORPORATION OF CERTAIN 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, 2013, filed with the SEC on September 4, 2013
and as amended on October 28, 2013;
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Our Quarterly Reports on Form 10-Q for the quarter ended September 30, 2013, filed with the SEC on November 14, 2013, for the quarter ended December 31, 2013, filed with the SEC on February 14, 2014, and for the quarter ended March 31, 2014, filed with the SEC on May 15, 2014 and

Our Current Reports on Form 8-K filed with the SEC on October 30, 2013, October 31, 2013, November 14, 2013, November 27, 2013, December 13, 2013, January 7, 2014, January 30, 2014, February 19, 2014, February 21, 2014 as amended on Form 8-K/A filed with the SEC on April 23, 2014, February 25, 2014, March 30, 2014, April 16, 2014, May 1, 2014, and on June __, 2014.

Our definitive proxy statement on Schedule 14A filed on April 4, 2014 for our annual meeting of shareholders held on April 25, 2014.

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.

Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for all purposes to the extent that a statement contained in this prospectus, or in any other subsequently filed document which is also incorporated or deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a 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.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended (“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 Securities Exchange Act of 1934, as amended (“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 Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K 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.

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_____ Units Consisting of
_____ shares of Common Stock and
Warrants to Purchase _____ shares of Common Stock

PROSPECTUS

Sole Book Running Manager

Maxim Group LLC

June__ 2014

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Prospectus

\$50,000,000.00

Common Stock

Preferred Stock

Warrants

Debt Securities

Units

From time to time, we may offer up to \$50,000,000.00 of our common stock, preferred stock, warrants to purchase common stock or preferred stock, debt securities (which will not exceed \$10,000,000) 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 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 \$47,877,000 based on 32,641,379 shares of outstanding common stock, of which 9,400,096 shares are held by affiliates, and a price of \$2.06 per share, which was the last reported sale price of our common stock as quoted on NASDAQ Capital Market on April 24, 2014. 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 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 June 4, 2014.

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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 and Section 21E of the Securities Exchange Act of 1934. 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”, “potential” or “continue”, or the negative of those terms or 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, 2013, Form 10-Q for the quarterly periods ended September 30, and December 31, 2013 and Current Report on Form 8-K dated February 18, 2014, all filed with the SEC, as well as in our other reports filed 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 Securities and Exchange Commission (“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 \$50,000,000.00.

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 More 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 More 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.

ABOUT CESCA THERAPEUTICS INC.

On February 18, 2014, TotipotentRX Corporation merged with and into ThermoGenesis Corp. (“Thermo”). In connection with the merger, Thermo changed its name from ThermoGenesis Corp. to Cesca Therapeutics Inc. As a result of the merger, Cesca is a fully integrated regenerative medicine company with the ability and expertise to research, design, and develop devices and disposables necessary to facilitate, or integrate into the design of clinical protocols and applications directed at cell therapies at the point of care, managing both risk of regulatory approval, and channel distribution. Cesca has the ability to develop new products, devices and disposables, and support existing products, while directing new development of products and services to clinical trials.

Our business strategy includes:

- **Practical, Commercializable Cell Therapies.** To deliver a proprietary, commercially viable, highly effective autologous (patient’s own cells) cell therapies to treat major diseases within the existing healthcare delivery system.
- **Ability to Rapidly and Cost-Effectively Implement New Clinical Trials.** To have the ability to rapidly initiate early clinical development of new cell therapies at its U.S. FDA-registered clinical research organization in India and generate high quality data at a fraction of the cost of clinical trials undertaken in the U.S. or Europe.
- **Positioned to Commercialize in Both Developed and Emerging Markets.** To utilize our existing U.S. and Asian footprints to uniquely position it to meet the needs of patients, hospitals and physicians across the globe. This footprint allows flexibility to meet the variable market demands in service and price.
- **Proprietary and Protected –** To possess an unmatched suite of proprietary technological and clinical assets to be deployed in the regenerative medicine markets. Our cell-therapy-related devices and platform technologies, unique cell formulations and treatment protocols are protected via a broad portfolio of patents and intellectual property filings.

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Cesca was founded in 1986, and our principal executive offices are located at 2711 Citrus Road, Rancho Cordova, California 95742. Our telephone number is (916) 858-5100. Our website is located at www.cescatherapeutics.com. Information contained on, or that can be accessed through, our website is not part of this prospectus.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended (“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 Securities Exchange Act of 1934, as amended (“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, Current Reports on Form 8-K 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, 2013, filed with the SEC on September 4, 2013 and as amended on October 28, 2013;

• Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, filed with the SEC on November 14, 2013; Quarterly Report on Form 10-Q for the quarter ended December 31, 2013, filed with the SEC on February 14, 2014; and Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, filed with the SEC on May 15, 2014;

• Our Current Reports on Form 8-K filed with the SEC on October 30, 2013, October 31, 2013, November 27, 2013, December 13, 2013, January 7, 2014, January 30, 2014, February 21, 2014, as amended on Form 8-K/A filed on April 23, 2014, February 25, 2014, March 5, 2014, April 16, 2014, and May 1, 2014; and

• Our definitive proxy statement on Schedule 14A filed on April 4, 2014 for our annual meeting of shareholders held on April 25, 2014.

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.

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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.

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 and bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the bylaws. These documents are filed as exhibits to the registration statement of which this prospectus is a part.

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Our amended and restated certificate of incorporation authorizes the issuance of up to 80,000,000 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.

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 were no shares of preferred stock outstanding.

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

Amended and Restated Certificate of Incorporation and Bylaws

Some provisions of Delaware law and our amended and restated 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 Chief Executive Officer or by the board of directors or the Chairman of the Board or by one or more shareholders holding shares in the aggregate entitled to cast not less than 10% of the votes at that meeting.

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 only be filled by vote of a majority of the remaining directors. The classification of the board of directors and the limitations on the removal of directors and filling of vacancies would have the effect of making it more difficult for a third party to acquire control of us, or of discouraging a third party from acquiring control of us.

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.

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.

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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 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 amended and restated 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 amended and restated 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.

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.

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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 amended and restated 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 amended and restated 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 Capital Market 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.

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.

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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;
- 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.

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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.

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 which will not exceed \$10,000,000, we do not intend to issue them pursuant to a trust indenture. However, if a trust indenture is requested by a placement agent, underwriter or broker-dealer as a condition of the financing, 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 Act of 1939 ("Trust Indenture Act") pursuant to an 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.

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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.

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 for 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” and “Description of Warrants” 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 Capital Market 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.

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.

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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.

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.

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

LEGAL MATTERS

Weintraub Tobin Chediak Coleman Grodin Law Corporation will pass upon legal matters in connection with the validity of the securities offered hereby for us.

EXPERTS

The consolidated financial statements of Cesca Therapeutics Inc. (formerly ThermoGenesis Corp.) appearing in Cesca Therapeutics Inc.'s (formerly ThermoGenesis Corp.'s) Annual Report (Form 10-K) for the year ended June 30, 2013 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.

The consolidated financial statements of MK Alliance, Inc. as of and for the years ended December 31, 2012 and 2011, appearing in Cesca Therapeutics' Form 8-K filed with the SEC on February 25, 2014, have been audited by Ernst & Young LLP, independent auditors, 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.