PROSPECTUS

CELSION CORPORATION

6,465,608 SHARES OF

COMMON STOCK

This prospectus relates to the disposition from time to time of up to 6,465,608 shares of our common stock, which are held or may be held by the selling stockholder named in this prospectus. The persons listed as our selling stockholders in this prospectus are offering and selling up to 3,218,612 shares of our common stock currently owned by such selling stockholders as well as up to 3,246,996 shares of our common stock that may be acquired by such selling stockholders upon exercise of outstanding common stock warrants. The common stock warrants are exercisable on or after December 2, 2011 at an exercise price of \$2.77 per share of common stock. We will receive up to an aggregate of \$8,994,179 of proceeds upon the exercise of the common stock warrants. However, all net proceeds from the sale of the shares of our common stock offered by this prospectus will go to the selling stockholders and we will not receive any proceeds from such sales by the selling stockholders.

The selling stockholder identified in this prospectus, or its permitted transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices, or at privately negotiated prices. We provide more information about how the selling stockholder may sell its shares of common stock in the section entitled "Plan of Distribution" beginning on page 14 of this prospectus. We will not be paying any underwriting discounts or commissions in connection with any offering of common stock under this prospectus.

Our common stock is listed on The NASDAQ Capital Market under the symbol "CLSN." On June 23, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was \$3.06.

Investing in our common stock involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" beginning on page 10 under Part I, Item 1A. of our Annual Report on Form 10-K for the year ended December 31, 2010 which are incorporated herein by reference, and under similar headings in any amendments or supplements to this prospectus.

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

The date of this prospectus is June 24, 2011.

[Missing Graphic Reference]

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ABOUT THIS PROSPECTUS

We have filed a shelf registration statement on Form S-3 with the Securities and Exchange Commission (the "SEC") covering the shares of common stock offered by this prospectus. Under this shelf registration process, the selling stockholder may from time to time, in one or more offerings, sell the common stock described in this prospectus. As permitted by the rules and regulations of the SEC, this prospectus omits certain information, exhibits and undertakings contained in the registration statement. For further information pertaining to the shares of common stock offered by this prospectus, reference is made to the registration statement, including the exhibits filed as a part thereof.

You should rely only on the information contained in or incorporated by reference into this prospectus (as supplemented and amended). We have not authorized anyone to provide you with different information. This document may only be used where it is legal to sell these securities. You should not assume that the information contained in this prospectus is accurate as of any date other than its date regardless of the time of delivery of the prospectus or any sale of our common stock.

We urge you to read carefully this prospectus (as supplemented and amended), together with the information incorporated herein by reference as described under the heading "Information Incorporated by Reference," before deciding whether to invest in any of the common stock being offered.

PROSPECTUS SUMMARY

This summary may not contain all of the information that may be important to you. You should read the entire prospectus (as supplemented and amended), including the financial data and related notes, risk factors and other information incorporated by reference in this prospectus, before making an investment decision.

Unless the context indicates otherwise, as used in this prospectus, the terms "Celsion," "the Company," "we," "us," and "our" refer to Celsion Corporation, a Delaware corporation.

Celsion Corporation

Overview

We are an innovative oncology drug development company focused on the development of therapeutics for those suffering with difficult to treat forms of cancer. We are working to develop and commercialize more efficient, effective, targeted chemotherapeutic oncology drugs based on our proprietary heat-activated liposomal technology. The promise of this drug technology is to maximize efficacy while minimizing side effects common to cancer treatments.

Our lead product, ThermoDox®, is being evaluated in a Phase III clinical trial, which we refer to as the HEAT study, for primary liver cancer and a Phase I/II study for recurrent chest wall breast cancer. ThermoDox® is a liposomal encapsulation of doxorubicin, an approved and frequently used oncology drug for the treatment of a wide range of cancers. Localized mild hyperthermia (greater than 40 degrees Celsius) releases the encapsulated doxorubicin from the liposome enabling high concentrations of doxorubicin to be deposited preferentially in the region of the tumor target.

We have also demonstrated feasibility for a product pipeline of cancer drugs that employ its heat activated liposomal technology in combination with known chemotherapeutics including docetaxel and carboplatin. We believe that our technology can improve efficacy and safety of anticancer agents whose mechanism of action and safety profile are well understood by the medical and regulatory communities. Our approach provides a comparatively cost effective, low risk approval pathway. Additionally, we have formed a joint research agreement with Phillips Healthcare to evaluate the combination of Phillips' high intensity focused ultrasound (HIFU) with ThermoDox® to determine the potential of this combination to treat a broad range of cancers.

For certain markets, we may seek licensing partners to share in the development and commercialization costs. We will also evaluate licensing cancer products from third parties for cancer treatments to expand our development pipeline.

In the fourth quarter of 2008, we entered into a Development, Product Supply and Commercialization Agreement with Yakult Honsha under which Yakult was granted the exclusive right to commercialize and market ThermoDox® for the Japanese market. We were paid a \$2.5 million up-front licensing fee and we have the potential to receive additional payments from Yakult upon receipt of marketing approval by the Japanese Ministry of Health, Labor and Welfare as well as upon the achievement of certain levels of sales and approval for new indications. We will receive double digit escalating royalties on the sale ThermoDox® in Japan, when and if any such sales occur. We also will be the exclusive supplier of ThermoDox® to Yakult.

Concurrent with a preferred equity financing in January 2011, we amended our Development, Product Supply and Commercialization Agreement with Yakult to provide for up to \$4.0 million in an accelerated partial payment to us of a future drug approval milestone. The terms of the agreement with Yakult provide for the payment to us of \$2.0 million upon the closing of the preferred equity financing and an additional \$2.0 million conditioned upon the resumption of enrollment of Japanese patients in the Japan cohort of the HEAT study. In consideration of these accelerated milestone payments from Yakult, we have agreed to reduce future drug approval milestone payments by approximately forty percent (40%). All other milestone payments are unaffected.

In 2005, we made a strategic decision to divest our medical device business. We sold this medical device business to Boston Scientific Corporation ("Boston Scientific") in 2007 for net aggregate payments of \$43 million, receiving \$13 million in 2007 and \$15 million in each of 2008 and 2009. Since then, we have raised approximately \$24.3 million in equity financing providing a total of \$67 million to support our research and operations.

Corporate Information

Celsion was founded in 1982 and is a Delaware corporation. Our principal offices are located at 10220-L Old Columbia Road, Columbia, Maryland 21046 and our telephone numbers are (410) 290-5390 and (800) 262-0394. Our website is www.celsion.com. Information contained on, or accessible through, our website does not constitute a part of this prospectus.

The Offering

On June 2, 2011, we completed the issuance and sale of 3,218,612 shares of common stock and warrants to purchase up to 3,218,612 shares of common stock to institutional investors as well as certain officers and directors of the Company (collectively, the "Investors") in a private placement transaction (the "Offering"). All of the Investors were accredited investors as such term is defined in Rule 501(a) of the Securities Act and the Offering was exempt from registration under the Securities Act pursuant to Rule 506 of the Securities Act. The common stock and warrants were sold in units (the "Units"), with each Unit consisting of one share of common stock and a warrant to purchase one share of common stock. Units sold to unaffiliated institutional investors were sold at a negotiated purchase price of \$2.65 per Unit and to officers and directors at \$2.895 per Unit, the latter representing the consolidated closing bid price per share of common stock plus a warrant premium of \$0.125 per Unit. The warrants are non-exercisable for six months and have a term of exercise of seventy-eight months from the date of issuance and an exercise price of \$2.77.

Rodman & Renshaw, LLC (the "Placement Agent") acted as the exclusive placement agent for the issuance and sale of the Units. Concurrent with the issuance and sale of the Units, we issued warrants to purchase up to an aggregate of 28,384 shares of common stock to the Placement Agent and certain of its affiliates on the same terms and conditions of the warrants issued to each of the Investors.

Concurrent with the issuance and sale of the Units, common stock and warrants in the Offering, we also entered into a Registration Rights Agreement with the Investors (the "Registration Rights Agreement") that requires us to file this registration statement with the SEC covering the resale by the Investors and the Placement Agent of the common stock and the shares of common stock issuable upon exercise of the warrants issued in the Offering.

This registration statement covers the resale by the Investors of the common stock and shares of common stock issuable upon exercise of the warrants from the Offering as well as shares of common stock issuable to the Placement Agent and certain of its affiliates upon exercise of the warrants issued to the Placement Agent and its affiliates in the Offering. We intend for the shares of common stock issuable upon exercise of the warrants from the Offering to be issued to Investors in transactions exempt from registration under the Securities Act pursuant to Rule 506 of the Securities Act.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risk factors beginning on page 10 under Part I, Item 1A. of our Annual Report on Form 10-K for the year ended December 31, 2010 which are incorporated herein by reference, and under similar headings in any amendments or supplements to this prospectus.



DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Statements and terms such as "expect", "anticipate", "estimate", "plan", "believe" and words of similar import regarding the Company's expectations as to the development and effectiveness of its technologies, the potential demand for our products, and other aspects of our present and future business operations, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Although we believe that our expectations are based on reasonable assumptions within the bounds of our knowledge of our industry, business and operations, we cannot guarantee that actual results will not differ materially from our expectations. In evaluating such forward-looking statements, readers should specifically consider the various factors discussed under the heading "Risk Factors" contained in this prospectus and under similar headings in any amendments or supplements to this prospectus including, without limitation, unforeseen changes in the course of research and development activities and in clinical trials; possible changes in cost and timing of development and testing, capital structure, and other financial items; changes in approaches to medical treatment; introduction of new products by others; possible acquisitions of other technologies, assets or businesses; and possible actions by customers, suppliers, competitors and regulatory authorities. These and other risks and uncertainties could cause actual results to differ materially from those indicated by such forward-looking statements, including those set forth under the heading "Risk Factors" contained in this prospectus and under similar headings in any amendments or supplements to this prospectus.

The discussion of risks and uncertainties set forth in this prospectus and in documents incorporated by reference herein is not necessarily a complete or exhaustive list of all risks facing the Company at any particular point in time. We operate in a highly competitive, highly regulated and rapidly changing environment and our business is in a state of evolution. Therefore, it is likely that new risks will emerge, and that the nature and elements of existing risks will change, over time. It is not possible for management to predict all such risk factors or changes therein, or to assess either the impact of all such risk factors on our business or the extent to which any individual risk factor, combination of factors, or new or altered factors, may cause results to differ materially from those contained in any forward-looking statement. Except as required by law, we disclaim any obligation to revise or update any forward-looking statement that may be made from time to time by us or on our behalf.

USE OF PROCEEDS

We will not receive any proceeds from the sale of our common stock by the selling stockholders. However, we may receive up to an aggregate of \$8,994,179 from the sale price of any common stock we sell to the selling stockholders upon exercise of the outstanding warrants, assuming all warrants are exercised for cash. In certain limited circumstances, the warrants may also be exercised by surrender of the warrants in exchange for an equal value of shares in accordance with the terms of the warrants (in which case we will not receive additional proceeds).

We anticipate that any net proceeds from the sale of stock we sell to the selling stockholders upon exercise of outstanding warrants will be used for general corporate purposes and working capital. The selling stockholder will receive all of the net proceeds from sales of the common stock sold pursuant to this prospectus.

SELLING STOCKHOLDERS

The following table sets forth as of June 10, 2011, information regarding the current beneficial ownership of our common stock by the persons identified, based on information provided to us by them, which we have not independently verified. Although we have assumed for purposes of the table that the selling stockholders will sell all of the shares offered by this prospectus, because they may from time to time offer all or some of their shares under this prospectus or in another manner, no assurance can be given as to the actual number of shares that will be resold by the selling stockholders (or any of them), or that will be held after completion of any resales. In addition, a selling stockholder may have sold or otherwise disposed of shares in transactions exempt from the registration requirements of the Securities Act or otherwise since the date he or she provided information to us. The selling stockholders are not making any representation that the shares covered by this prospectus will be offered for sale. Except as may be set forth below, no selling stockholder has held any position nor had any material relationship with us or our affiliates during the past three years.

Beneficial ownership is determined in accordance with Regulation 13D of the Securities Act. The terms of the warrants provide that no selling stockholder may exercise the warrants for shares of common stock for at least six months from the date of issue. The terms of the warrants further provide that a selling stockholder may not exercise the warrants, to the extent such exercise would cause such selling stockholder, together with its affiliates, to beneficially own a number of shares of common stock which would exceed 4.99% of our then outstanding shares of common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. Notwithstanding the foregoing, all shares that are issuable to a selling stockholder upon exercise of the warrants are included in the number of shares being offered in this table without taking the 4.99% limitation into account. The selling stockholders may sell all, some or none of their shares in this offering.

Because the selling stockholders may offer from time to time all or some of their shares under this prospectus, or in another permitted manner, no assurances can be given as to the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after completion of the sales.

Names	Number of Shares Owned As of the Date of this Prospectus(1)	Number of Shares Offered Hereby(2)	Number of Shares to Be Owned after Sale of Shares pursuant to this Offering (3)
Dr. Max E. Link Chairman of the Board	485,723	69,084	416,639
Michael H. Tardugno President, Chief Executive Officer and Director	1,040,370	34,542	1,005,828
Dr. Augustine Chow Director	214,084	69,084	145,000
Robert W. Hooper Director	134,814	51,814	83,000
Dr. Alberto Martinez, Director, and Claudia Martinez	183,250	69,084	114,166
Gregory Weaver Director	189,281	17,272	172,009
Jeffrey W. Church Vice President and Chief Financial Officer	218,574	6,908	211,666
Timothy J. Tumminello Controller and Chief Accounting Officer	55,927	3,454	52,473
Raj Prabhakar Executive Director, Strategic Planning and Business Development	373,745	69,084	304,661



84,850 213,708 44,300 600,000 433,498 515,129 21,288 4,258 2,838	58,000 116,000 26,000 300,000 300,000 226,414 21,288 4,258 2,838	26,850 97,708 18,300 300,000 133,498 288,715 0 0 0
213,708 44,300 600,000 433,498 515,129 21,288	116,000 26,000 300,000 300,000 226,414 21,288	97,708 18,300 300,000 133,498 288,715 0
213,708 44,300 600,000 433,498 515,129	116,000 26,000 300,000 300,000 226,414	97,708 18,300 300,000 133,498 288,715
213,708 44,300 600,000 433,498	116,000 26,000 300,000 300,000	97,708 18,300 300,000 133,498
213,708 44,300 600,000	116,000 26,000 300,000	97,708 18,300 300,000
213,708 44,300	116,000 26,000	97,708 18,300
213,708	116,000	97,708
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84,850	58,000	26,850
156,000	156,000	0
244,000	244,000	0
491,166	230,000	261,166
22,640	22,640	0
277,360	277,360	0
269,118	269,118	0
433,498	300,000	133,498
1,250,000	1,000,000	250,000
181,250	181,250	0
67,500	67,500	0
2,251,250	2,251,250	0
45,048	7,548	37,500
30,318	13,818	16,500
	45,048 2,251,250 67,500 181,250 1,250,000 433,498 269,118 277,360	45,0487,5482,251,2502,251,25067,50067,500181,250181,2501,250,0001,000,000433,498300,000269,118269,118277,360277,360

(1) Includes all securities directly and indirectly beneficially owned by each selling stockholder calculated in accordance with Regulation 13D of the Securities Act.

(2) Includes all shares of common stock issued, or issuable upon the exercise of warrants, in connection with the transactions described under "About This Prospectus – The Offering."

- (3) Assumes all shares registered under this prospectus will be sold.
- (4) Heights Capital Management, Inc., the authorized agent of Capital Ventures International ("CVI"), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares.
- (5) Downsview Capital, Inc. ("Downsview") is the general partner of Cranshire Capital, L.P. ("Cranshire") and consequently has voting control and investment discretion over securities held by Cranshire. Mitchell P. Kopin ("Mr. Kopin"), President of Downsview, has voting control over Downsview. As a result of the foregoing, each of Mr. Kopin and Downsview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares of common stock beneficially owned by Cranshire.
- (6) Downsview Capital, Inc. ("Downsview") is the investment manager for a managed account of Freestone Advantage Partners, LP and consequently has voting control and investment discretion over securities held in such account. Mitchell P. Kopin ("Mr. Kopin"), President of Downsview, has voting control over Downsview. As a result, each of Mr. Kopin and Downsview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares held in such account which are being registered hereunder.
- (7) Kingsbrook Partners LP ("Kingsbrook Partners") is the investment manager of Kingsbrook Opportunities Master Fund LP ("Kingsbrook Opportunities") and consequently has voting control and investment discretion over securities held by Kingsbrook Opportunities. Kingsbrook Opportunities GP LLC ("Opportunities GP") is the general partner of Kingsbrook Opportunities and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Partners. Ari J. Storch, Adam J. Chill and Scott M. Wallace are the sole managing members of Opportunities GP and GP LLC and as a result may be considered beneficial owners of any securities deemed beneficially owned by Opportunities GP and GP LLC. Each of Kingsbrook Partners, Opportunities GP, GP LLC and Messrs. Storch, Chill and Wallace disclaim beneficial ownership of these securities.
- (8) John J. Borer is the Senior Managing Director of Rodman & Renshaw, LLC, and has voting and dispositive power over the shares beneficially owned by Rodman & Renshaw, LLC.

If and when a selling stockholder sells all of his shares of common stock registered under this prospectus, the following selling stockholders will own more than one percent (1%) of our common stock at June 10, 2011.

Name	Percentage Ownership
Dr. Max E. Link	
Chairman of the Board	2.1 %
Michael H. Tardugno	
President, Chief Executive Officer and Director	5.1 %
Jeffrey W. Church	
Vice President and Chief Financial Officer	1.1 %
Raj Prabhakar	
Executive Director, Strategic Planning and Business Development	1.6 %

Information regarding selling stockholders that have a current relationship with us or our predecessors and affiliates and such relationships, if any, within the past three years is set forth below.

Dr. Max E. Link. Dr. Link has served as a director of the Company since 1997 and has been the Chairman of the Board of Directors since October 2001.

Mr. Michael H. Tardugno. Mr. Tardugno was appointed President and Chief Executive Officer of the Company on January 3, 2007 and was elected to the Board of Directors on January 22, 2007.

Dr. Augustine Chow. Dr. Augustine Chow was appointed to the Board of Directors in March 2007.

Mr. Robert W. Hooper. Mr. Hooper has served as a director of the Company since July 2010.

Dr. Alberto R. Martinez. Dr. Martinez joined Celsion's Board of Directors effective December 6, 2010.

Mr. Gregory Weaver. Mr. Weaver has been a director of the Company since 2005.

Mr. Jeffrey W. Church. Mr. Church joined Celsion in July 2010 as Vice President, Chief Financial Officer and Corporate Secretary.

Mr. Timothy J. Tumminello. Mr. Tumminello joined Celsion as Assistant Controller in April, 2009 and was appointed as the Company's Controller and Interim Chief Accounting Officer on January 6, 2010.

Mr. Raj Prabhakar. Mr. Prabhakar joined Celsion in January 2004 and served as Director of Program Management leading the liver cancer program from preclinical stage through launch of the global Phase III HCC study. He was promoted to his current position of Executive Director of Strategic Planning & Business Development in January 2009.

Mr. Christopher Garten. Mr. Garten joined Celsion in January 2011 as Director, Quality Assurance.

Mr. Thomas O'Brien performs consulting services for the Company.

Rodman & Renshaw, LLC acted as placement agent for the offering pursuant to which we issued the securities covered by this prospectus as more fully described in "Prospectus Summary - The Offering." Michael Mirsky and Noam Rubinstein are principals of Rodman & Renshaw, LLC.

AVAILABLE INFORMATION

We have filed a shelf registration statement on Form S-3 with the SEC covering the shares of common stock offered by this prospectus. As permitted by the rules and regulations of the SEC, this prospectus omits certain information, exhibits and undertakings contained in the registration statement. For further information pertaining to the shares of common stock offered by this prospectus, reference is made to the registration statement, including the exhibits filed as a part thereof.

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at *http://www.sec.gov.* The SEC's website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference into this prospectus is considered to be part of this prospectus, and information that we file later with the SEC automatically will update and supersede this information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act:

- (1) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, as filed with the SEC on March 28, 2011; and
- (2) Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011, as filed with the SEC on May 12, 2011;
- (3) Our Current Reports on Form 8-K as filed with the SEC on January 18, 2011, March 22, 2011, April 12, 2011, May 11, 2011 and June 2, 2011;
- (4) Our Proxy Statement relating to our Annual Meeting of Stockholders to be held on June 10, 2011, as filed with the SEC on April 29, 2011; and
- (5) The description of our common stock contained in our registration statement on Form 8-A, as filed with the SEC on May 26, 2000, as amended by a Form 8-A/A dated February 7, 2008, and any amendments or reports filed for the purpose of updating such description.

Except as otherwise indicated, all documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the date of this prospectus and prior to the filing of a subsequent post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold will be deemed to be incorporated by reference into this prospectus and to be part hereof from the date of filing of such documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded will not be deemed, except as modified or superseded, to constitute a part of this prospectus.

We will provide, free of charge, to any person to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the documents incorporated by reference into this prospectus, other than exhibits to those documents unless specifically incorporated by reference. To request a copy of those documents, you should contact us by writing to our principal executive offices at Celsion Corporation, Attention Corporate Secretary, 10220-L Old Columbia Road, Columbia, Maryland 21046.

DESCRIPTION OF OUR COMMON STOCK

General

Our authorized capital stock consists of 75,000,000 shares of common stock, \$0.01 par value per share, and 100,000 shares of preferred stock, \$0.01 par value per share, of which 15,000 shares of Series C Junior Participating Preferred Stock were reserved for issuance under the Stockholder Rights Plan (described below) and 5,350 shares were designated as Series A 8% Redeemable Convertible Preferred Stock. As of June 16, 2011, there were 19,642,591 shares of our common stock outstanding and 942 shares of preferred stock outstanding.

The following summary description of our common stock is based on the applicable provisions of the Delaware General Corporation Law, or the DGCL, and on the provisions of our certificate of incorporation, as amended, or the Certificate of Incorporation, and our bylaws, as amended, or the Bylaws. This information is qualified entirely by reference to the applicable provisions of the DGCL and our Certificate of Incorporation and Bylaws. For information on how to obtain copies of our Certificate of Incorporation and Bylaws, which are exhibits to the Registration Statement, see the section entitled "Where You Can Find Additional Information" in this prospectus.

Common Stock

Holders of common stock to be registered hereunder are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders and do not have cumulative voting rights. Subject to any preferential rights of any outstanding preferred stock, holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors of the Company, or the Board, out of funds legally available therefor. In the event of a dissolution, liquidation or winding-up of the Company, holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and any preferential rights of any outstanding preferred stock.

Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable. 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 may be designated and issued in the future.

The Board is classified into three classes, designated as Class I, Class II and Class III, with each class to be elected for three year terms on a staggered basis. At each annual meeting of stockholders, the directors elected to succeed those whose terms are expiring succeed to the same class as the directors they replace and each such new director is elected for a term to expire at the third annual meeting of stockholders after his or her election and when his or her successor is duly elected and qualified.

Holders of common stock have rights under the Rights Agreement described below under the caption "Anti-Takeover Considerations and Special Provisions of Our Certificate of Incorporation, Our Bylaws and the Delaware General Corporation Law—Stockholder Rights Plan".

Anti-Takeover Considerations and Special Provisions of Our Certificate of Incorporation, Our Bylaws and the Delaware General Corporation Law

Stockholder Rights Plan

On August 6, 2002, our Board declared a dividend distribution of one preferred share purchase right, or a Purchase Right, for each outstanding share of our common stock. The dividend was payable to the stockholders of record on August 6, 2002, or the Record Date, and with respect to shares of common stock issued thereafter until the Distribution Date (as defined below) and, in certain circumstances, with respect to shares of common stock issued after the Distribution Date. Except as set forth below, when it becomes exercisable, each Purchase Right entitles the registered holder to purchase from the Company one ten-thousandth (1 / 10,000) of a share of Series C Junior Participating Preferred Stock, par value \$0.01 per share, of the Company, or the Series C Preferred Stock, at a price of \$66.90 per one ten-thousandth (1 / 10,000) of a share of Series C Preferred Stock, or the Purchase Price, subject to adjustment. The description and terms of the Purchase Rights are set forth in a Rights Agreement between the Company and American Stock Transfer & Trust Company, as rights agent, dated as of August 15, 2002, or the Effective Date, as amended on January 16, 2003, collectively referred to herein as the Rights Agreement.

Initially, the Purchase Rights will be attached to all certificates representing shares of common stock outstanding as of the Record Date, and no separate certificates representing the Purchase Rights, or Right Certificates, will be distributed. The Purchase Rights will separate from the common stock upon the earlier to occur of (A) a person or group of affiliated or associated persons having acquired beneficial ownership of fifteen percent (15%) or more of the outstanding shares of common stock or (B) ten (10) days (or such later date as the Board may determine) after the commencement of, or announcement of an intention to make, a tender offer or exchange offer the completion of which would result in a person or group of affiliated persons becoming an Acquiring Person (as defined below) (in either case, the Distribution Date). A person or group whose acquisition of shares of common stock cause a distribution date pursuant to clause (A) above is an "Acquiring Person," with certain exceptions set forth in the Rights Agreement. The date on which a person or group is first publicly announced to have become such by the Company or such Acquiring Person or an earlier date on which a majority of the then-sitting members of the Board becomes aware of the existence of such Acquiring Person is referred to below and in the Rights Agreement as the "Stock Acquisition Date".

If any person becomes an Acquiring Person, each holder of a Purchase Right will thereafter have the right (the "Flip-In Right") to receive, upon exercise, the number of shares of common stock (or, in certain circumstances, one ten-thousandth (1 / 10,000) of a share of Series C Preferred Stock) or other securities of the Company having a value (immediately before such triggering event) equal to two (2) times the exercise price of the Purchase Right. Notwithstanding the foregoing, after the Flip-In Right is triggered as described above, all Purchase Rights that are, or (under certain circumstances specified in the Rights Agreement) were, beneficially owned by any Acquiring Person or any affiliate or associate thereof will be null and void. The Board has the option, at any time after any person becomes an Acquiring Person but before an Acquiring Person becomes the beneficial owner of fifty percent (50%) or more of the Common Stock, to exchange all or part of the then-exercisable Purchase Rights (excluding those that have become void, as described in the immediately preceding sentence) for shares of common stock, at a one-to-one exchange ratio, appropriately adjusted to reflect any stock split, stock dividend or similar transaction having occurred since the Effective Date.

If, at any time after the Stock Acquisition Date, (A) the Company consolidates or mergers with another person, (B) any Person merges with and into the Company, with the Company being the surviving corporation and, in connection with such merger, all or part of the common stock is changed into or exchanged for stock or other securities of any other Person (or of the Company) or cash or any other property, or (C) the Company sells or otherwise transfers, in one or more transactions, assets or earning power aggregating fifty percent (50%) or more of its consolidated assets or earning power to any other Person, then each holder of a Purchase Right (except Purchase Rights which previously have been voided as set forth above) shall thereafter have the right (the "Flip-Over Right") to receive, upon exercise, common shares of the acquiring company (or, in certain circumstances, its parent), having a value equal to two times the exercise price of the Purchase Right. The holder of a Right will continue to have the Flip-Over Right whether or not such holder exercises or surrenders the Flip-In Right.

Series C Preferred Stock purchasable upon exercise of the Purchase Rights will not be redeemable. Each share of Series C Preferred Stock will be entitled to ten thousand (10,0000) votes per share (subject to customary antidilution provisions) on matters submitted to a vote of the shareholders. Each share of Series C Preferred Stock will be entitled to a minimum preferential quarterly dividend payment of \$100 per share but, if greater, will be entitled to a total dividend per share of ten thousand (10,000) times the dividend declared per share of common stock. In the event of liquidation, the holders of shares of the Series C Preferred Stock will be entitled to a minimum preferential liquidation payment per share in an amount equal to the greater of \$66.90 or ten thousand (10,000) times the payment made per share of common stock plus an amount equal to accrued and unpaid dividends and distributions thereon, whether or not declared, to the date of such payment. Finally, in the event of any merger, consolidation or other transaction in which shares of common stock are exchanged, each share of Series C Preferred Stock will be entitled to receive ten thousand (10,000) times the amount received per share of common stock. These rights are protected by customary antidilution provisions.

At any time before the earlier to occur of (A) a person becoming an Acquiring Person or (B) the expiration of the Rights, and under certain other circumstances, the Company may redeem the Purchase Rights in whole, but not in part, at a price of \$0.01 per Purchase Right, or the Redemption Price. The Purchase Rights are not exercisable until the Distribution Date and will expire on August 15, 2012, unless earlier redeemed.

Certificate of Incorporation and Bylaws

A number of provisions of our Certificate of Incorporation and our Bylaws concern matters of corporate governance and the rights of our stockholders. Provisions that grant our Board the ability to issue shares of preferred stock and to set the voting rights, preferences and other terms thereof may discourage takeover attempts that are not first approved by our Board, including takeovers that may be considered by some stockholders to be in their best interests, such as those attempts that might result in a premium over the market price for the shares held by stockholders. Certain provisions could delay or impede the removal of incumbent directors even if such removal would be beneficial to our stockholders, such as the classification of our Board and the lack of cumulative voting. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

These provisions may have the effect of deterring hostile takeovers or delaying changes in our control or in our management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and in the policies they implement, and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts.

These provisions also could discourage or make more difficult a merger, tender offer or proxy contest, even if they could be favorable to the interests of stockholders, and could potentially depress the market price of our common stock. Our Board believes that these provisions are appropriate to protect our interests and the interests of our stockholders.

Classification of Board and No Cumulative Voting. Our Certificate of Incorporation and Bylaws provide for our Board to be divided into three classes, with staggered three-year terms. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders representing a majority of the shares of common stock outstanding will be able to elect all of our directors due to be elected at each annual meeting of our stockholders.

Meetings of and Actions by Stockholders. Our Bylaws provide that annual meetings of our stockholders may take place at the time and place designated by our Board. A special meeting of our stockholders may be called at any time by the Board, the chairman of the Board or the president. Subject to the rights of the holders of any series of preferred stock or any other class of stock or series thereof having a preference over the common stock as to dividends or upon liquidation, stockholders may take action only at a regular or special meeting of stockholders and not by written consent without a meeting.

Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our Bylaws provide that stockholders seeking to bring business before an annual meeting of stockholders or to nominate candidates for election as directors at an annual meeting of stockholders must provide timely notice in writing. To be timely, a stockholder's notice must be delivered to our principal executive offices not less than 120 days prior to the date specified in the Company's proxy statement released to stockholders in connection with the previous year's annual meeting. If no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than 30 days from the date contemplated at the time of the previous year's proxy statement, notice by the stockholder in order to be timely must be received by the Company no later than the close of business on the later of the 120 th day prior to the date of such annual meeting or the tenth day following the day on which public announcement of the date of the meeting was first made. Our Bylaws also specify requirements as to the form and content of a stockholder's notice. These provisions may preclude stockholders from bringing matters before an annual meeting of stockholders or from making nominations for the election of directors at an annual meeting of stockholders.

Filling of Board Vacancies. Our Certificate of Incorporation and our Bylaws provide that vacancies in the Board and newly created directorships resulting from any increase in the authorized number of directors on the Board may be filled by a majority of the directors remaining in office, even though that number may be less than a quorum of the Board, or by a sole remaining director. A director so elected to fill a vacancy shall serve for the remaining term of the predecessor he or she replaced and until his or her successor is elected and has qualified, or until his or her earlier resignation, removal or death.

Amendment of the Certificate of Incorporation. Our Certificate of Incorporation may be amended, altered, changed or repealed at a meeting of the stockholders of the Company entitled to vote thereon by the affirmative vote of a majority of the outstanding stock entitled to vote thereon and a majority of the outstanding stock of each class entitled to vote thereon as a class, in the manner prescribed by the DGCL.

Amendment of the Bylaws. Our Bylaws may be altered, amended, changed, added-to or repealed (i) by the board of directors or (ii) by the stockholders entitled to vote. The bylaws can only be amended if such amendment would not conflict with the Certificate of Incorporation or applicable law. Any bylaw made or altered by the requisite number of stockholders may be altered or repealed by the Board or by the requisite number of stockholders.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law ("Section 203"), which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

• before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

• upon completion of the transaction that 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 began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

• on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2 / 3 % of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a business combination to include the following:

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

• any sale, lease, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;

• subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

• any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

• the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits 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 or any entity or person affiliated with or controlling or controlled by such entity or person.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, 59 Maiden Lane, Plaza Level, New York, NY 10038. Its phone number is (800)-937-5449.

NASDAQ Capital Market Listing

Our common stock is listed on The NASDAQ Capital Market under the symbol "CLSN."

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock or any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- · ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- · purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this Prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- \cdot a combination of any such methods of sale; and
- · any other method permitted by applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.



The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which all of the shares may be sold without restriction pursuant to Rule 144 of the Securities Act.

EXPERTS

Stegman & Company, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2010, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Stegman & Company's report, given on their authority as experts in accounting and auditing.

LEGAL MATTERS

Our counsel, Seyfarth Shaw LLP, New York, New York, issued an opinion to us regarding certain legal matters in connection with this offering, including the validity of the issuance of the shares of common stock offered by this prospectus.

6,465,608 Shares CELSION CORPORATION Common Stock

PROSPECTUS

June 23, 2011