Celsion CORP Form 424B3 September 28, 2011

Filed pursuant to Rule 424(b)(3)

Under the Securities Act of 1933 in connection with Registration Statement No. 333-176486 PROSPECTUS

1,793,443 Shares

Celsion Corporation

Common Stock

This prospectus relates to the sale or other disposition from time to time of up to 1,793,443 shares of our common stock, which includes 512,412 shares of our common stock issuable upon the exercise of warrants, which are held by the selling stockholder named in this prospectus. The shares of common stock covered by this prospectus were previously issued by us to the selling stockholders in a private placement that closed on July 25, 2011, or underlie certain common stock purchase warrants that were previously issued by us to the selling stockholders in this prospectus. We are not selling any shares of common stock under this prospectus and will not receive any of the proceeds from the sale of shares of common stock by the selling stockholders. However, we will receive the proceeds of any cash exercise of the warrants.

The selling stockholders may sell or otherwise dispose of the shares of common stock covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell or otherwise dispose of their shares of common stock in the section entitled "Plan of Distribution" on page 24. The selling shareholders will pay all brokerage fees and commissions and similar expenses. We will pay all expenses (except brokerage fees and commissions and similar expenses) relating to the registration of the shares with the Securities and Exchange Commission.

Our common stock is listed on The NASDAQ Capital Market under the symbol "CLSN." On September 13, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was \$3.35.

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 3 of this prospectus, 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 passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is September 22, 2011

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in or incorporated by reference into this prospectus, as supplemented and amended. We have not, and the selling stockholders have not, authorized anyone to provide you with different information. If anyone provides you with additional, different or inconsistent information, you should not rely on it. You should not assume that the information we have included in this prospectus is accurate as of any date other than the date of this prospectus or that any information we have incorporated by reference is accurate as of any date other than the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since that date. This document may only be used where it is legal to sell these securities.

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.

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. The Celsion brand and product names, including but not limited to Celsion®, contained in this document are trademarks, registered trademarks or service marks of Celsion Corporation in the United States (U.S.) and certain other countries. This document may also contain references to trademarks and service marks of other companies that are the property of their respective owners.

PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in the securities covered by this prospectus. For a more complete understanding of Celsion and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus, including the information incorporated by reference in this prospectus, including the information referred to under the heading "Risk Factors" in this prospectus beginning on page 3.

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 our 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 Philips Healthcare to evaluate the combination of Philips' 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 of 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 provided 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.

Corporate Information

We were founded in 1982 and are a Delaware corporation. Our shares of common stock trade on The NASDAQ Capital Market under the symbol "CLSN." Our principal executive offices are located at 10220-L Old Columbia Road, Columbia, Maryland 21046-2364. Our telephone number is (410) 290-5390 and our website is www.celsion.com. The information available on or through our website is not part of this prospectus and should not be relied upon.

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The Offering

The following is a brief summary of the offering. You should read the entire prospectus carefully, including "Risk Factors" beginning on page 3, and the information, including financial information, included in our filings with the Securities and Exchange Commission and incorporated in this document by reference.

Common stock to be offered by the selling stockholders	1,793,443 shares
Use of proceeds	We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus. However, we will receive the proceeds of any cash exercise of the warrants.
NASDAQ Capital Market Symbol	CLSN
Dividends	We have never declared or paid any cash dividends on our common stock and do not currently anticipate paying cash dividends in the foreseeable future.
Risk Factors	See "Risk Factors" beginning on page 3 of this prospectus and other information included in this prospectus for a discussion of the factors you should consider before deciding to invest in shares of our common stock.

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RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks discussed below, together with the risks under the heading "Risk Factors" beginning on page 10 under Part I, Item IA of our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the SEC on March 28, 2011, on page 21 of our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011, filed with the SEC on May 12, 2011, and on page 27 of our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2011, filed with the Securities and Exchange Commission (SEC) on August 9, 2011, as well as the other information in this prospectus, as amended or supplemented, and the information and documents incorporated by reference. If any of the identified risks occur, they could materially adversely affect our business, financial condition, operating results or prospects and the trading price of our securities. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial may also impair our business, financial condition, operating results and prospects and the trading price of our securities.

RISKS RELATED TO OUR BUSINESS

We do not generate operating income and will require additional financing in the future. If additional capital is not available, we may have to curtail or cease operations.

Our business currently does not generate the cash necessary to finance our operations. Since our inception, our expenses have substantially exceeded our revenues, resulting in continuing losses and an accumulated deficit of \$101 million at December 31, 2010. We incurred a net loss of \$18.8 million for the year ended December 31, 2010 and a net loss of \$10.7 million for the six months ended June 30, 2011. We presently have no product revenue. We may need to raise additional capital to fund research and development and to develop and commercialize our products. Our future capital needs depend on many factors, including the scope, duration and expenditures associated with our clinical trials, the outcome of potential licensing transactions, if any, competing technological developments and the regulatory approval process for our products.

We may seek to raise necessary funds through public or private equity offerings, debt financings or additional strategic alliances and licensing arrangements. We may not be able to obtain additional financing on terms favorable to us, if at all. General market conditions may make it very difficult for us to seek financing from the capital markets. We may be required to relinquish rights to our technologies or products, or grant licenses on terms that are not favorable to us, in order to raise additional funds through alliance, joint venture or licensing arrangements. If adequate funds are not available, we may have to delay, reduce or eliminate one or more of our research or development programs and reduce overall overhead expense. Such events could cause our independent registered public accounting firm to indicate that there may be substantial doubt about our ability to continue as a going concern in future periods.

If our products fail in clinical trials, we will be unable to obtain or maintain FDA and international regulatory approvals and will be unable to sell those products.

To obtain regulatory approvals from the U.S. Food and Drug Administration (FDA) and international regulatory agencies, we must conduct clinical trials demonstrating that our products are safe and effective. We may need to amend ongoing trials or the FDA and/or international regulatory agencies may require us to perform additional trials beyond those we planned. Such occurrences could result in significant delays and additional costs, and related clinical trials may be unsuccessful.

We do not expect to generate significant revenue for the foreseeable future.

We have devoted our resources to developing a new generation of products but will not be able to market these products until we have completed clinical testing and obtain all necessary governmental approvals. In addition, our products are still in various stages of development and testing and cannot be marketed until we have completed clinical testing and obtained necessary governmental approval. Accordingly, our revenue sources are, and will remain, extremely limited until our products are clinically tested, approved by the FDA and successfully marketed. We cannot guarantee that any or all of our products will be successfully tested, approved by the FDA or marketed, successfully or otherwise, at any time in the foreseeable future or at all.

If we do not raise additional capital, we may not be able to complete the development, testing and commercialization of our product candidates.

As of June 30, 2011, we had approximately \$5.5 million in cash and short term investments. Subsequent to June 30, 2011, we completed three equity offerings with gross proceeds totaling approximately \$25 million in the aggregate. To complete the development and commercialization of our products, we will need to raise substantial amounts of additional capital. We do not have any committed sources of financing and cannot offer any assurances that alternate funding will be available in a timely manner, on acceptable terms or at all.

In the event we can not raise additional capital, we may be required to delay, scale back or eliminate certain aspects of our operations or attempt to obtain funds through unfavorable arrangements with partners or others that may force us to relinquish rights to certain of our technologies, products or potential markets or that could impose onerous financial or other terms. Furthermore, if we cannot fund our ongoing development and other operating requirements, particularly those associated with our obligations to conduct clinical trials under our licensing agreements, we will be in breach of these licensing agreements and could therefore lose our license rights, which could have material adverse effects on our business.

We may experience limitations on the utilization of our net operating loss carry forwards.

As of December 31, 2010, we had net operating loss carry forwards for income tax reporting purposes of approximately \$81.1 million, which represented a deferred tax asset of approximately \$31.3 million. These net operating loss carry forwards begin to expire in 2022. We continue to evaluate our net operating losses and currently maintain a valuation allowance equal to the deferred tax asset, thereby recognizing a net deferred tax asset of zero. Net operating losses are subject to the ownership change limitations of the Internal Revenue Code Section 382 (Section 382), under which if we have a greater than 50% ownership change (as defined by Section 382), our net operating losses may be limited for purposes of offsetting future taxable income. In connection with our recent financings, we are currently evaluating if a Sec 382 change in control has occurred. We cannot assure these net operating losses will not be subject to Section 382 limitations.

We have no internal sales or marketing capability and must enter into alliances with others possessing such capabilities to commercialize our products successfully.

We intend to market our products, if and when such products are approved for commercialization by the FDA, either directly or through other strategic alliances and distribution arrangements with third parties. There can be no assurance that we will be able to enter into third-party marketing or distribution arrangements on advantageous terms or at all. To the extent that we do enter into such arrangements, we will be dependent on our marketing and distribution partners. In entering into third-party marketing or distribution arrangements, we expect to incur significant additional expense. There can be no assurance that, to the extent that we sell products directly or we enter into any commercialization arrangements with third parties, such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance for our products and services.

Our business depends on license agreements with third parties to permit us to use patented technologies. The loss of any of our rights under these agreements could impair our ability to develop and market our products.

Our success will depend, in substantial part, on our ability to maintain our rights under license agreements granting us rights to use patented technologies. We have entered into license agreements with Duke University, under which we have exclusive rights to commercialize medical treatment products and procedures based on Duke's thermo-sensitive liposome technology. The Duke University license agreement contains a license fee, royalty and/or research support provisions, testing and regulatory milestones, and other performance requirements that we must meet by certain deadlines. If we were to breach these or other provisions of the license and research agreements, we could lose our ability to use the subject technology, as well as compensation for our efforts in developing or exploiting the technology. Any such loss of rights and access to technology could have a material adverse effect on our business.

Further, we cannot guarantee that any patent or other technology rights licensed to us by others will not be challenged or circumvented successfully by third parties, or that the rights granted will provide adequate protection. We are aware of published patent applications and issued patents belonging to others, and it is not clear whether any of these patents or applications, or other patent applications of which we may not have any knowledge, will require us to alter any of our potential products or processes, pay licensing fees to others or cease certain activities. Litigation, which could result in substantial costs, may also be necessary to enforce any patents issued to or licensed by us or to determine the scope and validity of others' claimed proprietary rights. We also rely on trade secrets and confidential information that we seek to protect, in part, by confidentiality agreements will not be breached, that, even if not breached, that they are adequate to protect our trade secrets, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known to, or will not be discovered independently by, competitors.

Our products could infringe patent rights of others, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages or limit our ability to commercialize our products.

Our commercial success depends on our ability to operate without infringing the patents and other proprietary rights of third parties. There may be third party patents that relate to our products and technology. We may unintentionally infringe upon valid patent rights of third parties. Although we are currently not involved in any material litigation involving patents, a third party patent holder could assert a claim of patent infringement against us in the future. Alternatively, we may initiate litigation against the third party patent holder to request that a court declare that we are not infringing the third party's patent and/or that the third party's patent is invalid or unenforceable. If a claim of infringement is asserted against us and is successful, and therefore we are found to infringe, we could be required to pay damages for infringement, including treble damages if it is determined that we knew or became aware of such a patent and we failed to exercise due care in determining whether or not we infringed the patent. If we have supplied infringing products to third parties or have licensed third parties to manufacture, use or market infringing products, we may be obligated to indemnify these third parties for damages they may be required to pay to the patent holder and for

any losses they may sustain. We can also be prevented from selling or commercializing any of our products that use the infringing technology in the future, unless we obtain a license from such third party. A license may not be available from such third party on commercially reasonable terms, or may not be available at all. Any modification to include a non-infringing technology may not be possible or if possible may be difficult or time-consuming to develop, and require revalidation, which could delay our ability to commercialize our products. Any infringement action asserted against us, even if we are ultimately successful in defending against such action, would likely delay the regulatory approval process of our products, harm our competitive position, be expensive and require the time and attention of our key management and technical personnel.

We rely on third parties to conduct all of our clinical trials. If these third parties are unable to carry out their contractual duties in a manner that is consistent with our expectations, comply with budgets and other financial obligations or meet expected deadlines, we may not receive certain development milestone payments or be able to obtain regulatory approval for or commercialize our product candidates in a timely or cost-effective manner.

As of June 30, 2011, we had 16 full-time employees. We rely, and expect to continue to rely, on third-party Clinical Research Organizations to conduct our clinical trials. Because we do not conduct our own clinical trials, we must rely on the efforts of others and cannot always control or predict accurately the timing of such trials, the costs associated with such trials or the procedures that are followed for such trials. We do not anticipate significantly increasing our personnel in the foreseeable future and therefore, expect to continue to rely on third parties to conduct all of our future clinical trials. If these third parties are unable to carry out their contractual duties or obligations in a manner that is consistent with our expectations or meet expected deadlines, if they do not carry out the trials in accordance with budgeted amounts, if the quality or accuracy of the clinical data they obtain is compromised due to their failure to adhere to our clinical protocols or for other reasons, or if they fail to maintain compliance with applicable government regulations and standards, our clinical trials may be extended, delayed or terminated or may become prohibitively expensive, we may not receive development milestone payments when expected or at all, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. At this time, the Company is unable to determine what, if any, effect the catastrophic events resulting from the March 11, 2011 earthquake and Tsunami in Japan will have on the conduct or timeframe of clinical trials for our Phase III HEAT study at sites in Japan. In addition, enrollment of additional patients at clinical sites in Japan for our Phase III HEAT study is currently on hold pending the DMC's ongoing review of safety and efficacy data in accordance with the PMDA in Japan and the DMC's charter. A failure to resume patient enrollment at clinical trial sites in Japan could have a material adverse affect on our financial condition as the resumption of patient enrollment is a condition to our receipt of an accelerated \$2 million development milestone payment under our agreement with Yakult and is a mandatory conversion event of our 8% redeemable convertible preferred stock.

Our business is subject to numerous and evolving state, federal and foreign regulations and we may not be able to secure the government approvals needed to develop and market our products.

Our research and development activities, pre-clinical tests and clinical trials, and ultimately the manufacturing, marketing and labeling of our products, are all subject to extensive regulation by the FDA and foreign regulatory agencies. Pre-clinical testing and clinical trial requirements and the regulatory approval process typically take years and require the expenditure of substantial resources. Additional government regulation may be established that could prevent or delay regulatory approval of our product candidates. Delays or rejections in obtaining regulatory approvals would adversely affect our ability to commercialize any product candidates and our ability to generate product revenues or royalties.

The FDA and foreign regulatory agencies require that the safety and efficacy of product candidates be supported through adequate and well-controlled clinical trials. If the results of pivotal clinical trials do not establish the safety and efficacy of our product candidates to the satisfaction of the FDA and other foreign regulatory agencies, we will not receive the approvals necessary to market such product candidates. Even if regulatory approval of a product candidate is granted, the approval may include significant limitations on the indicated uses for which the product may be marketed.

We are subject to the periodic inspection of our clinical trials, facilities, procedures and operations and/or the testing of our products by the FDA to determine whether our systems and processes are in compliance with FDA regulations. Following such inspections, the FDA may issue notices on Form 483 and warning letters that could cause us to modify certain activities identified during the inspection. A Form 483 notice is generally issued at the conclusion of an FDA inspection and lists conditions the FDA inspectors believe may violate FDA regulations. FDA guidelines specify that a warning letter is issued only for violations of "regulatory significance" for which the failure to adequately and promptly achieve correction may be expected to result in an enforcement action.

Failure to comply with FDA and other governmental regulations can result in fines, unanticipated compliance expenditures, recall or seizure of products, total or partial suspension of production and/or distribution, suspension of the FDA's review of product applications, enforcement actions, injunctions and criminal prosecution. Under certain circumstances, the FDA also has the authority to revoke previously granted product approvals. Although we have internal compliance programs, if these programs do not meet regulatory agency standards or if our compliance is deemed deficient in any significant way, it could have a material adverse effect on the Company.

We are also subject to recordkeeping and reporting regulations. These regulations require, among other things, the reporting to the FDA of adverse events alleged to have been associated with the use of a product or in connection with certain product failures.

Labeling and promotional activities also are regulated by the FDA. We must also comply with record keeping requirements as well as requirements to report certain adverse events involving our products. The FDA can impose other post-marketing controls on us as well as our products including, but not limited to, restrictions on sale and use, through the approval process, regulations and otherwise.

Many states in which we do, or in the future, may do business, or in which our products may be sold, impose licensing, labeling or certification requirements that are in addition to those imposed by the FDA. There can be no assurance that one or more states will not impose regulations or requirements that have a material adverse effect on our ability to sell our products.

In many of the foreign countries in which we may do business or in which our products may be sold, we will be subject to regulation by national governments and supranational agencies as well as by local agencies affecting,

among other things, product standards, packaging requirements, labeling requirements, import restrictions, tariff regulations, duties and tax requirements. There can be no assurance that one or more countries or agencies will not impose regulations or requirements that could have a material adverse effect on our ability to sell our products.

Legislative and regulatory changes affecting the heath care industry could adversely affect our business.

Political, economic and regulatory influences are subjecting the healthcare industry to potential fundamental changes that could substantially affect our results of operations. There have been a number of government and private sector initiatives during the last few years to limit the growth of healthcare costs, including price regulation, competitive pricing, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements. It is uncertain which legislative proposals, if any, will be adopted (or when) or what actions federal, state, or private payors for health care treatment and services may take in response to any health care reform proposals or legislation. We cannot predict the effect health care reforms may have on our business and we can offer no assurances that any of these reforms will not have a material adverse effect on our business. These actual and potential changes are causing the marketplace to put increased emphasis on the delivery of more cost-effective treatments. In addition, uncertainty remains regarding proposed significant reforms to the U.S. healthcare system.

The success of our products may be harmed if the government, private health insurers and other third-party payors do not provide sufficient coverage or reimbursement.

Our ability to commercialize our new cancer treatment systems successfully will depend in part on the extent to which reimbursement for the costs of such products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. The reimbursement status of newly approved medical products is subject to significant uncertainty. We cannot guarantee that adequate third-party insurance coverage will be available for us to establish and maintain price levels sufficient for us to realize an appropriate return on our investment in developing new therapies. Government, private health insurers and other third-party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for new therapeutic products approved for marketing by the FDA. Accordingly, even if coverage and reimbursement are provided by government, private health insurers and third-party payors for uses of our products, market acceptance of these products would be adversely affected if the reimbursement available proves to be unprofitable for health care providers.

Our products may not achieve sufficient acceptance by the medical community to sustain our business.

Our cancer treatment development projects using ThermoDox® plus RFA or microwave heating, are currently in clinical trials. Any or all of these projects may prove not to be effective in practice. If testing and clinical practice do not confirm the safety and efficacy of our product candidates or, even if further testing and practice produce positive results but the medical community does not view these new forms of treatment as effective and desirable, our efforts to market our new products may fail, with material adverse consequences to our business.

Technologies for the treatment of cancer are subject to rapid change, and the development of treatment strategies that are more effective than our technologies could render our technologies obsolete.

Various methods for treating cancer currently are, and in the future are expected to be, the subject of extensive research and development. Many possible treatments that are being researched, if successfully developed, may not require, or may supplant, the use of our technologies. The successful development and acceptance of any one or more of these alternative forms of treatment could render our technology obsolete as a cancer treatment method.

We may not be able to hire or retain key officers or employees that we need to implement our business strategy and develop or products and business.

Our success depends significantly on the continued contributions of our executive officers, scientific and technical personnel and consultants, and on our ability to attract additional personnel as we seek to implement our business strategy and develop our products and businesses. During our operating history, we have assigned many essential responsibilities to a relatively small number of individuals. However, as our business and the demands on our key employees expand, we have been, and will continue to be, required to recruit additional qualified employees. The competition for such qualified personnel is intense, and the loss of services of certain key personnel or our inability to attract additional personnel to fill critical positions could adversely affect our business. Further, we do not carry "key man" insurance on any of our personnel. Therefore, loss of the services of key personnel would not be ameliorated by the receipt of the proceeds from such insurance.

Our success depends in part on our ability to grow and diversify, which in turn will require that we manage and control our growth effectively.

Our business strategy contemplates growth and diversification. Our ability to manage growth effectively will require that we continue to expend funds to improve our operational, financial and management controls, reporting systems and procedures. In addition, we must effectively expand, train and manage our employees. We will be unable to manage our business effectively if we are unable to alleviate the strain on resources caused by growth in a timely and successful manner. There can be no assurance that we will be able to manage our growth and a failure to do so could have a material adverse effect on our business.

We face intense competition and the failure to compete effectively could adversely affect our ability to develop and market our products.

There are many companies and other institutions engaged in research and development of various technologies for cancer treatment products that seek treatment outcomes similar to those that we are pursuing. We believe that the level of interest by others in investigating the potential of possible competitive treatments and alternative technologies will continue and may increase. Potential competitors engaged in all areas of cancer treatment research in the United States and other countries include, among others, major pharmaceutical, specialized technology companies, and universities and other research institutions. Most of our current and potential competitors have substantially greater financial, technical, human and other resources, and may also have far greater experience than do we, both in pre-clinical testing and human clinical trials of new products and in obtaining FDA and other regulatory approvals. One or more of these companies or institutions could succeed in developing products or other technologies that are more effective than the products and technologies that we have been or are developing, or which would render our technology and products obsolete and non-competitive. Furthermore, if we are permitted to commence commercial sales of any of our products, we will also be competing, with respect to manufacturing efficiency and marketing, with companies having substantially greater resources and experience in these areas.

We may be subject to significant product liability claims and litigation.

Our business exposes us to potential product liability risks inherent in the testing, manufacturing and marketing of human therapeutic products. We presently have product liability insurance limited to \$10 million per incident and \$10 million annually. If we were to be subject to a claim in excess of this coverage or to a claim not covered by our insurance and the claim succeeded, we would be required to pay the claim with our own limited resources, which could have a material adverse effect on our business. In addition, liability or alleged liability could harm the business by diverting the attention and resources of our management and by damaging our reputation.

RISKS RELATED TO OUR COMMON STOCK

Our stockholders may experience significant dilution as a result of future equity offerings and exercise of outstanding options and warrants.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. In addition, we have a significant number of securities convertible into, or allowing the purchase of, our common stock, including 8,369,539 shares of common stock issuable upon exercise of outstanding warrants as of August 22, 2011. As of August 22, 2011, 561,124 shares of common stock were reserved for future issuance under our stock incentive plan. As of that date, there were also options outstanding to purchase 2,893,764 shares of our common stock. You will incur dilution upon exercise of any outstanding stock options or warrants. The issuance of additional shares as a result of any such exercise, or the subsequent sale of securities, could adversely affect the price of our common stock.

Future sales of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of August 22, 2011, we had 26,632,062 shares of common stock outstanding, all of which shares, other than shares held by our directors and certain officers, were eligible for sale in the public market, subject in some cases to compliance with the requirements of Rule 144 promulgated under the Securities Act of 1933, as amended, including the volume limitations and manner of sale requirements. In addition, all of the shares of common stock issuable upon conversion of our preferred stock or exercise of warrants will be freely tradable without restriction or further registration upon issuance.

The market price of our common stock has been, and may continue to be volatile and fluctuate significantly, which could result in substantial losses for investors and subject us to securities class action litigation.

The trading price for our common stock has been, and we expect it to continue to be, volatile. The price at which our common stock trades depends upon a number of factors, including our historical and anticipated operating results, our financial situation, announcements of technological innovations or new products by us or our competitors, our ability or inability to raise the additional capital we may need and the terms on which we raise it, and general market and economic conditions. Some of these factors are beyond our control. Broad market fluctuations may lower the market price of our common stock and affect the volume of trading in our stock, regardless of our financial condition, results of operations, business or prospects. It is impossible to assure you that the market price of our shares of common stock will not fall in the future. Among the factors that may cause the market price of our common stock to fluctuate are the risks described in this "Risk Factors" section and other factors, including:

fluctuations in our quarterly operating results or the operating results of our competitors;

variance in our financial performance from the expectations of investors;

changes in the estimation of the future size and growth rate of our markets;

changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;

failure of our products to achieve or maintain market acceptance or commercial success;

conditions and trends in the markets we serve;

changes in general economic, industry and market conditions;

success of competitive products and services;

changes in market valuations or earnings of our competitors;

changes in our pricing policies or the pricing policies of our competitors;

announcements of significant new products, contracts, acquisitions or strategic alliances by us or our competitors;

changes in legislation or regulatory policies, practices, or actions;

the commencement or outcome of litigation involving our company, our general industry or both;

recruitment or departure of key personnel;

changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;

actual or expected sales of our common stock by our stockholders; and

the trading volume of our common stock.

In addition, the stock market in general, The NASDAQ Capital Market and the market for pharmaceutical companies in particular, may experience a loss of investor confidence. Such loss of investor confidence may result in extreme price and volume fluctuations in our common stock that are unrelated or disproportionate to the operating performance of our business, financial condition or results of operations. These broad market and industry factors may materially harm the market price of our common stock and expose us to securities class action litigation. Such litigation, even if unsuccessful, could be costly to defend and divert management's attention and resources, which could further materially harm our financial condition and results of operations.

We may be unable to maintain compliance with NASDAQ Marketplace Rules which could cause our common stock to be delisted from The NASDAQ Capital Market. This could result in the lack of a market for our common stock, cause a decrease in the value of an investment in us, and adversely affect our business, financial condition and results of operations.

On April 6, 2011, we received notice from The NASDAQ Listing Qualifications Department that we were not in compliance with the minimum Market Value of Listed Securities (MVLS) requirement for continued listing on The NASDAQ Capital Market, as set forth in NASDAQ Listing Rule 5550(b)(2) (the Rule), which requires a listed company to maintain a minimum MVLS of \$35 million. On May 10, 2011, we received a letter from NASDAQ stating that our MVLS had been \$35 million or greater for the previous ten consecutive business days (from April 26, 2011 to May 9, 2011) and that we had regained compliance with the Rule.

We cannot guarantee that our MVLS will remain at or above \$35 million and if our MVLS again drops below \$35 million, the stock could become subject to delisting again. If our common stock is delisted, trading of the stock will most likely take place on an over-the-counter market established for unlisted securities, such as the Pink Sheets or the OTC Bulletin Board. An investor is likely to find it less convenient to sell, or to obtain accurate quotations in seeking to buy, our common stock on an over-the-counter market, and many investors may not buy or sell our common stock due to difficulty in accessing over-the-counter markets, or due to policies preventing them from trading in securities not listed on a national exchange or other reasons. In addition, as a delisted security, our common stock would be subject to SEC rules regarding "penny stock," which impose additional disclosure requirements on broker-dealers. The regulations relating to penny stocks, coupled with the typically higher cost per trade to investors in penny stocks due to factors such as broker commissions generally representing a higher percentage of the price of a penny stock than of a higher priced stock, would further limit the ability and willingness of investors to trade in our common stock. For these reasons and others, delisting would adversely affect the liquidity, trading volume and price of our common stock, causing the value of an investment in us to decrease and having an adverse effect on our business, financial condition and results of operations, including our ability to attract and retain qualified executives and employees and to raise capital.

The adverse capital and credit market conditions could affect our liquidity.

Adverse capital and credit market conditions could affect our ability to meet liquidity needs, as well as our access to capital and cost of capital. The capital and credit markets have been experiencing extreme volatility and disruption for more than 12 months. In recent months, the volatility and disruption have reached unprecedented levels and the markets have exerted downward pressure on availability of liquidity and credit capacity for certain issuers. For example, recently credit spreads have widened considerably. Our results of operations, financial condition, cash flows and capital position could be materially adversely affected by continued disruptions in the capital and credit markets.

Our stock historically has been thinly traded. Therefore, stockholders may not be able to sell their shares freely.

While our common stock is listed on The NASDAQ Capital Market, the volume of trading historically has been relatively light. There can be no assurance that our historically light trading volume, or any trading volume whatsoever, will be sustained in the future. Therefore, there can be no assurance that our stockholders will be able to sell their shares of our common stock at the time or at the price that they desire, or at all.

We have never paid dividends on our common stock and we do not anticipate paying cash dividends on our common stock in the foreseeable future.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for the foreseeable future for holders of our common stock.

Anti-takeover provisions in our charter documents and Delaware law could prevent or delay a change of control.

Our certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition that a stockholder may consider favorable by authorizing the issuance of "blank check" preferred stock. This preferred stock may be issued by our board of directors on such terms as it determines, without further stockholder approval. Therefore, our board of directors may issue such preferred stock on terms unfavorable to a potential bidder in the event that our board of directors opposes a merger or acquisition. In addition, our classified board of directors may discourage such transactions by increasing the amount of time necessary to obtain majority representation on our board of directors. We also have implemented a stockholder rights plan and distributed to our stockholders one right per share of our common stock. When these rights become exercisable, each right entitles their holders to purchase one ten-thousandth (1/10,000) of a share of our Series C Junior Participating Preferred Stock at a price of \$66.90 per one ten-thousandth (1/10.000) share. If any person or group acquires more than 15% of our common stock, the holders of rights (other than the person or group crossing the 15% threshold) will be able to receive, upon the exercise of their rights and in lieu of the Series C Junior Participating Preferred Stock, the number of shares of our common stock (or the number of shares of stock of any company into which we are merged) having a value equal to twice the exercise price of their rights in exchange for the \$66.90 exercise price. Because these rights may substantially dilute stock ownership by a person or group seeking to take us over without the approval of our board of directors, our rights plan could make it more difficult for a person or group to take us over (or acquire significant ownership interest in us) without negotiating with our board of directors regarding such a transaction. Certain other provisions of our bylaws and of Delaware law may also discourage, delay or prevent a third party from acquiring or merging with us, even if such action were beneficial to some, or even a majority, of our stockholders.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained or incorporated by reference in this prospectus, as may be amended and supplemented, constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and releases issued by the SEC and within the meaning of Section 27A of the Securities Act of 1933, as amended (Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). From time to time, we publish forward-looking statements relating to matters such as anticipated financial performance, business prospects, technological developments, new products, research and development activities and other aspects of our present and future business operations as well as similar matters. These statements involve known and unknown risks, uncertainties and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements include, among others:

- any statements regarding future operations, plans, regulatory filings or approvals, including the plans and objectives of management for future operations or programs or proposed new products or services;
- any statements regarding the performance, or likely performance, or outcomes or economic benefit of any of our research and development activities or proposed or potential clinical trials or new drug filing strategies or timelines, including whether any of our clinical trials will be completed successfully within any specified time period or at all;
- any projections of cash resources, revenue, operating expense or other financial terms;
- any statements regarding pending or future mergers or acquisitions;
- any statements regarding approaches to medical treatment or possible actions by customers, suppliers, strategic partners, potential strategic partners, competitors and regulatory authorities;
- any statements regarding compliance with the listing standards of The NASDAQ Capital Market; and
- any statements regarding future economic conditions or performance, and any statement of assumptions underlying any of the foregoing.

In some cases, you can identify forward-looking statements by terminology such as "expect," "anticipate," "estimate," "plan," "believe," "could," "intend," "predict," "may," "should," "will" and words of similar import regarding the Company's expectar Forward-looking statements are only predictions and actual events or results may differ materially. Although we believe that our expectations are based on reasonable assumptions within the bounds of our current 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, you should specifically consider various factors, including the risks outlined under the heading "Risk Factors" contained in this prospectus supplement, the accompanying prospectus and any related free writing prospectus, and in our most recent annual report on Form 10-K and in our most recent quarterly report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC. The discussion of risks and uncertainties set forth in those filings 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 over time new risks will emerge and the nature and elements of existing risks will change. 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. Forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should carefully read this prospectus supplement, the accompanying prospectus and any related free writing prospectus, together with the information incorporated herein or therein by reference as described under the section entitled "Where You Can Find Additional Information," and with the understanding that our actual future results may materially differ from what we expect.

Except as required by law, forward-looking statements speak only as of the date they are made, and we assume no obligation to update any forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in any forward-looking statements, even if new information becomes available.

USE OF PROCEEDS

The selling stockholders will receive all of the net proceeds from sales of the common stock sold pursuant to this prospectus. We will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders pursuant to this prospectus. A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase our common stock. Upon any exercise of the warrants for cash, the selling stockholders would pay us the exercise price of the warrants. The cash exercise price of the warrants is \$4.22 per share of our common stock. Under certain conditions set forth in the warrants, the warrants are exercisable on a cashless basis. If any warrants are exercised on a cashless basis, we would not receive any cash payment from the selling stockholders upon any exercise of such warrants.

PRICE RANGE OF OUR COMMON STOCK

Our common stock trades on The NASDAQ Capital Market under the symbol "CLSN." The following table sets forth, for the periods indicated, the reported high and low closing sale prices per share of our common stock on The NASDAQ Capital Market.

Year ended December 31, 2011	Hig	gh	Lo	W
First Quarter Second Quarter Third Quarter (through September 13, 2011)	\$ \$ \$	2.97 3.37 4.23	\$ \$ \$	2.18 2.16 2.74
Year ended December 31, 2010	Hig	gh	Lo	W
First Quarter Second Quarter Third Quarter Fourth Quarter	\$ \$ \$	4.69 5.44 3.42 3.63	\$ \$ \$	2.76 3.13 2.97 2.01
Year ended December 31, 2009	Hig	gh	Lo	W
First Quarter Second Quarter Third Quarter Fourth Quarter	\$ \$ \$	3.60 4.85 5.18 3.54	\$ \$ \$ \$	2.05 3.00 3.25 2.74

The reported last sale price of our common stock on The NASDAQ Capital Market on September 13, 2011 was \$3.35 per share.

As of September 13, 2011, there were approximately 11,000 holders of record of our common stock.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and do not currently anticipate paying cash dividends in the foreseeable future.

DESCRIPTION OF OUR CAPITAL 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). As of August 22, 2011, there were 26,632,062 shares of our common stock outstanding and no shares of preferred stock outstanding.

The following summary description of our capital stock is based on the applicable provisions of the Delaware General Corporation Law (DGCL) and on the provisions of our certificate of incorporation, as amended (certificate of incorporation), and our bylaws, as amended (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 of which this prospectus is a part, 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 our board of directors 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.

Our board of directors 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."

Preferred Stock

Pursuant to our certificate of uncorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or NASDAQ rules), to designate and issue shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the designations, powers (including voting), privileges, preferences and relative participating, optional or other rights, if any, of the shares of each such series and the qualifications, limitations or restrictions thereof, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

We will fix the designations, powers (including voting), privileges, preferences and relative participating, optional or other rights, if any, of the preferred stock of each series, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. The description in such certificate of designation relating to that series will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction or remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into or exchangeable for other securities, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;

- liability as to further calls or to assessment by the Company, if any;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

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

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock or other securities. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

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 of directors declared a dividend distribution of one preferred share purchase right (Purchase Right), for each outstanding share of our common stock. The dividend was payable to the stockholders of record on August 6, 2002 (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 (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 (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 (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 (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 our board of directors 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 or associated 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 our board of directors 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. Our board of directors 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 (10,000) 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 Series C Preferred Stock will be entitled to receive ten thousand (10,000) times the amount received per share of such save 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, i.e., 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 of directors 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 of directors, 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 of directors 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 of directors 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 of directors 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 of directors. A special meeting of our stockholders may be called at any time by our board of directors, the chairman of our board of directors 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 120th 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 our board of directors and newly created directorships resulting from any increase in the authorized number of directors on our board of directors may be filled by a majority of the directors remaining in office, even though that number may be less than a quorum of our board of directors, 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 our stockholders 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 our board of directors 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 for our common stock is American Stock Transfer & Trust Company located at 59 Maiden Lane, Plaza Level, New York, New York 10038. Its telephone number is 800-937-5449.

NASDAQ Capital Market Listing

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

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SECURITY OWNERSHIP OF

CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the ownership of our common stock as of August 22, 2011 by (i) each director; (ii) each of our named executive officers named in the Summary Compensation Table appearing under the heading "Executive Compensation" in our Definitive Proxy Statement on Schedule 14A for our 2011 Annual Meeting of Stockholders, as filed with the SEC on April 29, 2011; (iii) all executive officers and directors of Celsion as a group; and (iv) all those known to us to be beneficial owners of more than five percent of our common stock.

	NUMBER OF	PERCENT OF
	SHARES OF	SHARES
	COMMON STOCK	OF COMMON
	BENEFICIALLY	STOCK
NAME OF BENEFICIAL OWNER*	OWNED(1)	OUTSTANDING(2)
Ayer Capital Partners Master Fund L.P.		
c/o Ayer Capital Management, LP		
230 California Street, Suite 600		
San Francisco, CA 94112(3)	2,388,985	6.83 %
Max E. Link(4)	466,296	1.33%
Augustine Chow(5	149,084	**
Frederick J. Fritz	2,000	**
Robert W. Hooper(6)	77,814	**
Alberto Martinez(7)	138,250	**
Michael H. Tardugno(8)	759,953	2.17%
Nicholas Borys(9)	227,361	**
Gregory Weaver(10)	82,272	**
Jeffrey W. Church(11)	56,907	**
Robert A. Reed(12)	26,739	**
Directors and Executive Officers as a group (10		
persons)(13)	1,986,676	5.68%

* The address of each of the persons named is c/o Celsion Corporation, 10220-L Old Columbia Road, Columbia, MD 21046.

** Less than 1%.

- (1)Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table above have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.
- (2)Based on 35,001,601 shares of common stock and warrants to purchase shares of common stock outstanding as of August 22, 2011.
- (3) Based on a Schedule 13G filed with the SEC on June 7, 2011 by Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC reporting beneficial ownership of shares of our common stock, and includes 902,400

shares of common stock and warrants to purchase 360,960 shares of common stock purchased by Ayer Capital Partners Master Fund, L.P. in the private placement that closed on July 25, 2011. Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan and Ayer Capital Partners, LLC may be considered the beneficial owner of any securities deemed to be beneficially owned by Ayer Capital Partners Master Fund, L.P.

- (4)Includes 205,271 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (5)Includes 114,542 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (6) Includes 30,907 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (7)Includes 69,125 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (8)Includes 598,937 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (9)Includes 196,674 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (10)Includes 58,636 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (11)Includes 31,787 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (12)Includes 20,833 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (13)Includes only directors and executive officers as of August 22, 2011. Includes 1,326,712 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.

SELLING STOCKHOLDERS

On July 25, 2011, we issued in a private placement to the selling stockholders an aggregate of (i) 1,281,031 shares of common stock and (ii) warrants to purchase up to 512,412 shares of common stock. Each of the warrants is exercisable at an exercise price of \$4.22 per share of common stock. Pursuant to the registration rights agreement we entered in relation to the private placement, we agreed to file a registration statement, of which this prospectus is a part, with the Securities and Exchange Commission (SEC) to register the sale or other disposition of the shares of our common stock we issued and any common stock issued as a result of the exercise of the warrants, and to use our commercially reasonable efforts to keep the registration statement continuously effective for a period that will terminate upon the earlier of (i) July 25, 2012, (ii) the date on which all securities covered by the registration statement of which this prospectus is a part, as such registration statement may be amended from time to time, have been sold, and (iii) the date on which all securities Act of 1933, as amended. Certain of the selling stockholders have a position, office or material relationship with us. Each such material relationship is described in the table and footnotes below.

The following table sets forth:

- the name of each of the selling stockholders;
- the number of shares of our common stock owned by each such selling stockholder prior to this offering;
- the percentage (if one percent or more) of common stock owned by each such selling stockholder prior to this offering;
- the number of shares of our common stock which may be sold or otherwise disposed of pursuant to this prospectus;
- the number of shares of our common stock to be owned upon completion of this offering, assuming all such shares are sold;
- the percentage (if one percent or more) of common stock owned by each such selling stockholder after this offering, assuming all such shares are sold; and
- if applicable, a description of the material relationship such selling stockholder has with us.

This table is prepared based on information supplied to us by the selling stockholders, as further described in the footnotes to the table. As used in this prospectus, the term "selling stockholder" includes each of the selling stockholders listed below, and any donees, pledges, transferees or other successors in interest selling shares received after the date of this prospectus from a selling stockholder as a gift, pledge or other transfer. The number of shares in the column "Number of Shares Being Offered" represents all of the shares that a selling stockholder may sell or otherwise dispose of under this prospectus. A selling stockholder may sell or otherwise dispose of some, all or none of such selling stockholder's shares. We do not know how long the selling stockholders will hold the shares before selling or otherwise disposing of them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale or disposition of any of the shares. For the purposes of the table below, we assume that the selling shareholders will sell all shares of common stock covered by this prospectus.

Except as described below, the selling shareholders have sole voting and investment power over the shares of common stock listed in the table.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Securities Exchange Act of 1934, as amended. The percentage of shares beneficially owned prior to the offering is based on 35,001,601 shares of common stock and warrants to purchase shares of common stock outstanding as of August 22, 2011.

	Number of Shares of Common Stock Owned Prior to Offering(1) Number of		Number of	Number of Shares of Common Stock Owned After Offering(1)	
Name of Selling Stockholder	Number	Percent	Shares Being Offered	Number	Percent
Ayer Capital Partners Master Fund, L.P.(3) c/o Ayer Capital Management, LP 230 California Street, Suite 600 San Francisco, CA 94112	2,388,985(4)(5)	6.8%	1,263,360(5)	1,125,625	3.2%
Ayer Capital Partners Kestrel Fund, L.P.(6) c/o Ayer Capital Management, LP 230 California Street, Suite 600 San Francisco, CA 94112	35,560(7)(8)	*	35,560(8)		*
Epworth Ayer Capital(9) c/o Ayer Capital Management, LP 230 California Street, Suite 600 San Francisco, CA 94112	101,080(10)(11)	*	101,080(11)		*
Techlink Venture Limited(12) Room 1902, Cheung Kong Center 2 Queens Road Central Hong Kong	163,934(13)	*	163,934(14)		*
Kingsbrook Opportunities Master Fund LP(15) c/o Kingsbrook Partners LP	493,624(16)(17)	1.4%	163,936(17)	329,688	*

 590 Madison Avenue,

 27th Floor

 New York, NY 10022

 Max E. Link(18)

 c/o Celsion Corporation

 10220-L Old Columbia

 Road

 Columbia, MD 21046
 466,296(19)(20)

 1.3%
 65,573(20)
 400,723

 1.1%

- * Represents beneficial ownership of less than one percent of the outstanding shares of our common stock.
- (1)Includes shares of common stock issuable upon exercise of warrants. For the purposes hereof, we assume the issuance of all shares issuable upon exercise of warrants.
- (2) The selling stockholder has identified itself as an affiliate of a registered broker-dealer. The selling stockholder has represented to us that it purchased the shares in the ordinary course of its business and, at the time of purchase, with no arrangement or understanding, directly or indirectly, with any persons to distribute such shares.
- (3) Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC filed a Schedule 13G with the SEC on June 7, 2011 reporting beneficial ownership of shares of our common stock. Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan and Ayer Capital Partners, LLC may be considered the beneficial owner of any securities deemed to be beneficially owned by Ayer Capital Partners Master Fund, L.P.
- (4) Based on beneficial ownership of 1,125,625 shares of common stock, as reported by Ayer Capital Partners Master Fund, L.P. in a Schedule 13G filed with the SEC on June 7, 2011.
- (5) Includes 902,400 shares of common stock and warrants to purchase 360,960 shares of common stock purchased in the private placement that closed on July 25, 2011.
- (6) Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC filed a Schedule 13G with the SEC on June 7, 2011 reporting beneficial ownership of shares of our common stock. Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC may be considered the beneficial owner of any securities deemed to be beneficially owned by Ayer Capital Partners Kestrel Fund, L.P.

- (7) Based on Schedule 13G filed with the SEC on June 7, 2011 by Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC reporting beneficial ownership of shares of our common stock.
- (8) Includes 25,400 shares of common stock and warrants to purchase 10,160 shares of common stock purchased in the private placement that closed on July 25, 2011.
- (9) Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC filed a Schedule 13G with the SEC on June 7, 2011 reporting beneficial ownership of shares of our common stock. Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC may be considered the beneficial owner of any securities deemed to be beneficially owned by Epworth -- Ayer Capital.
- (10) Based on Schedule 13G filed with the SEC on June 7, 2011 by Ayer Capital Management, LP, ACM Capital Partners, LLC, Jay Venkatesan, Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners, LLC reporting beneficial ownership of shares of our common stock.
- (11)Includes 72,200 shares of common stock and warrants to purchase 28,880 shares of common stock purchased in the private placement that closed on July 25, 2011.
- (12)Based on information supplied to us by Harmony Asset Limited on July 27, 2011. Techlink Venture Limited is an indirect wholly-owned subsidiary of Harmony Asset Limited. Sino Path Consultants Limited is the largest shareholder of Harmony Asset Limited. Augustine Chow, a director of Celsion, is a director and shareholder of Sino Path Consultants Limited.
- (13)Based on information supplied to us by Harmony Asset Limited on July 27, 2011.
- (14) Includes 117,096 shares of common stock and warrants to purchase 46,838 shares of common stock purchased in the private placement that closed on July 25, 2011.
- (15) 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 Opportunities. KB GP LLC (GP LLC) is the general partner of Kingsbrook Partners 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.
- (16)Based on information supplied to us by Kingsbrook Opportunities Master Fund LP on July 25, 2011. Includes warrants to purchase up to 329,688 shares of common stock.
- (17)Includes 117,097 shares of common stock and warrants to purchase 46,839 shares of common stock purchased in the private placement that closed on July 25, 2011.

Max E. Link has served as the chairman of our board of directors since October 2001 and as a director of the Company since 1997.

- (19)Includes 205,271 shares of common stock underlying options and warrants currently exercisable or exercisable within 60 days of August 22, 2011.
- (20) Includes 46,838 shares of common stock and warrants to purchase 18,735 shares of common stock purchased in the private placement that closed on July 25, 2011.

Information about any other selling stockholders will be included in prospectus supplements or post-effective amendments, if required. Information about the selling stockholders may change from time to time. Any changed information with respect to which we are given notice will be included in prospectus supplements.

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 on 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 or over-the-counter distribution in accordance with the rules of the applicable exchange or other market;
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;
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 of 1933, as amended (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 the shares may be sold without restriction pursuant to Rule 144 of the Securities Act.

LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by O'Melveny & Myers LLP of Menlo Park, California.

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.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Exchange Act. In accordance with the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information filed by us are available to the public free of charge at www.sec.gov. You may also read and copy any document we file with the SEC at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference facilities by calling the SEC at 1-800-SEC-0330. Copies of certain information filed by us with the SEC are also available on our website at www.celsion.com. The information available on or through our website is not part of this prospectus supplement or the accompanying prospectus and should not be relied upon.

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

INFORMATION INCORPORATED BY REFERENCE

SEC rules allow us to "incorporate by reference" into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference into this prospectus is considered to be part of this prospectus. These documents may include Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements. You should read the information incorporated by reference because it is an important part of this prospectus.

This prospectus incorporates by reference the documents listed below, other than those documents or the portions of those documents deemed to be furnished and not filed in accordance with SEC rules:

• our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 filed with the SEC on March 28, 2011;

our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011 filed with the SEC on May 12, 2011 and our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2011 filed with the SEC on August 9, 2011;

our Current Reports on Form 8-K filed with the SEC on January 18, 2011, March 22, 2011, April 12, 2011, May 11, 2011, May 27, 2011, June 2, 2011, July 1, 2011, July 6, 2011, July 11, 2011, July 12, 2011, July 25, 2011 and July 26, 2011;

our proxy statement relating to our annual meeting of stockholders filed with the SEC on April 29, 2011; and

the description of our common stock contained in our registration statement on Form 8-A 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.

Any statement contained in any document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any prospectus supplement 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 will provide without charge to each person, including any beneficial owners, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference into this prospectus but not delivered with this prospectus. You may request a copy of these documents by writing or telephoning us at the following address.

Celsion Corporation 10220-L Old Columbia Road Columbia, Maryland 21046-2364 (410) 290-5390 Attention: Gregory Weaver Senior Vice President & CFO