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Celsion Corporation Announces Issuance of Key U.S. Patent Covering its Novel TheraSilence™ RNA Program

Company's First-in-Class Technology Enables Lung-Specific Delivery of RNA with a Development Focus on Lung Cancer

LAWRENCEVILLE, N.J., March 1, 2016 /PRNewswire/ -- Celsion Corporation (NASDAQ: CLSN), a fully-integrated oncology company focused on the development of a portfolio of innovative cancer treatments, including directed chemotherapies, immunotherapies and RNA- or DNA-based therapies for the treatment of cancer and other difficult-to-treat diseases, today announced that the U.S. Patent and Trademark Office (USPTO) issued a key patent (U.S. Patent No. 9,254,334 B2) which provides broad intellectual property protection covering the therapeutic use of the Company's proprietary TheraSilence™ lung-specific delivery system in a broad range of therapeutic entities, including the delivery of synthetically-generated inhibitory RNA (RNAi) such as small inhibitory RNAs (siRNAs), microRNAs, microRNA mimics, anti-microRNAs and related molecules that can regulate protein expression at the transcript level by exploiting endogenous cell mechanisms. This new patent further strengthens previously issued patents directed at the composition of the Company's proprietary TheraSilence™ family of delivery systems.

"This newly granted patent enhances our strong IP protection surrounding the novel composition of matter claims for our TheraSilence lung-specific delivery system and expands our use claims covering a broad range of therapeutic RNA entities to provide unique treatment options for lung diseases that are not addressable by conventional drugs," said Michael H. Tardugno, chairman, president and chief executive officer of Celsion Corporation. "Our strategy is to seek to maximize the value of this platform in the near-term by pursuing collaborations and development agreements, while focusing internal development efforts on our two clinical stage candidates, ThermoDox® and GEN-1, our DNA-based immunotherapy for the localized treatment of ovarian cancer."

Celsion previously announced compelling preclinical findings confirming that the Company's TheraSilence™ technology platform can safely and effectively deliver RNA to the lungs in non-human primates. In the study, TheraSilence-formulated signaling RNA resulted in preferential expression in the lungs, with expression in the liver at less than 15% of expression levels observed in the lungs. Expression levels in tissues other than the lung, spleen and liver were very low or at background levels. These data build on previous preclinical studies indicating the preferential delivery of RNA to the lung using the TheraSilence RNA delivery system.

- A murine study demonstrated that the delivery of TheraSilence-formulated siRNA molecules designed to target vascular endothelial receptor 2 (VEGFR2), a protein that is critical for the growth of new blood vessels in tumors, significantly inhibited VEGFR2 expression and lung tumor growth.
- Delivery of a TheraSilence-formulated anti-micro RNA molecule into rats with experimentally induced pulmonary arterial hypertension appeared to normalize vascular remodeling that occurs in the lung and help restore cardiac function that is compromised as a result of the disease.

About TheraSilence™

TheraSilence™ is a technology platform for the delivery of synthetically-generated messenger RNA, inhibitory RNA (RNAi) such as small inhibitory RNAs (siRNAs), microRNAs, microRNA mimics, anti-microRNAs, and related molecules that can regulate protein expression at the transcript level by exploiting endogenous cell mechanisms. Inhibitory RNA based therapies have potential for targeting virtually any disease related gene with a high degree of specificity and thus eliminating so called "non-drugable" target classes. The technology addresses the primary obstacle to nucleic acid-based therapeutics, which is the safe and efficient delivery to target cells. These systems are chemically flexible and amenable to attachment of tissue-targeted ligands, in vivo stabilizing agents and other functional moieties which can tailor a formulation for a particular application and delivery modality. These features can provide high specificity for RNAi delivery to select tissue, enhance stability and reduce in vivo toxicity.

About Celsion Corporation

Celsion is a fully-integrated oncology company focused on developing a portfolio of innovative cancer treatments, including

directed chemotherapies, immunotherapies and RNA- or DNA-based therapies. The Company's lead program is ThermoDox®, a proprietary heat-activated liposomal encapsulation of doxorubicin, currently in Phase III development for the treatment of primary liver cancer and in Phase II development for the treatment of recurrent chest wall breast cancer. The pipeline also includes GEN-1, a DNA-based immunotherapy for the localized treatment of ovarian and brain cancers. Celsion has two platform technologies for the development of novel nucleic acid-based immunotherapies and other anti-cancer DNA or RNA therapies, including TheraPlas™ and TheraSilence™. For more information on Celsion, visit our website: http://www.celsion.com.

Celsion wishes to inform readers that forward-looking statements in this release are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Readers are cautioned that such forward-looking statements involve risks and uncertainties including, without limitation, unforeseen changes in the course of research and development activities and in clinical trials; the uncertainties of and difficulties in analyzing interim clinical data, particularly in small subgroups that are not statistically significant; FDA and regulatory uncertainties and risks; the significant expense, time, and risk of failure of conducting clinical trials; the need for Celsion to evaluate its future development plans; possible acquisitions or licenses of other technologies, assets or businesses; possible actions by customers, suppliers, competitors, regulatory authorities; and other risks detailed from time to time in the Celsion's periodic reports and prospectuses filed with the Securities and Exchange Commission. Celsion assumes no obligation to update or supplement forward-looking statements that become untrue because of subsequent events, new information or otherwise.

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