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Celsion Provides Summary of Research and Development Day Held on October 12, 2017

Leading Ovarian Cancer and Immunotherapy Experts Discuss GEN-1 Clinical Programs in Newly Diagnosed Stage III/IV Ovarian Cancer Patients

LAWRENCEVILLE, N.J., Oct. 18, 2017 (GLOBE NEWSWIRE) -- Celsion Corporation (NASDAQ:CLSN), an oncology drug development company, today provided a summary of GEN-1 immunotherapy-related presentations made during the Company's Research and Development (R&D) Day held on Thursday, October 12, 2017. This summary is intended to provide easy access to pertinent, top line information discussed during the conference. A complete webcast of the presentations are available on Celsion's website at www.celsion.com under the heading *News & Investors / Financial Events / Featured Events* - October 12, 2017 - *Celsion to Host Research and Development Update*.

The GEN-1 immunotherapy presentations focused on the Company's clinical and translational research data from its OVATION Study, a Phase Ib dose escalating clinical trial combining GEN-1, the Company's DNA-based immunotherapy, with the standard of care for the treatment of newly-diagnosed patients with advanced Stage III/IV ovarian cancer who will undergo neoadjuvant chemotherapy followed by interval debulking surgery. GEN-1 is an interleukin-IL-12 (IL-12) DNA plasmid vector formulated as a nanoparticle in a non-viral delivery system to cause the sustained local production and secretion of the IL-12 protein loco-regionally at the tumor site. The lead clinical investigator for the OVATION Study and leading immuno-oncology experts from the Roswell Park Cancer Institute presented their current experience with GEN-1 immunotherapy for the treatment of ovarian cancer.

- **Khursheed Anwer, Ph.D.,** Celsion's Executive Vice President & Chief Scientific Officer, presented the following:
  - GEN-1 immunotherapy is a powerful pro-immune modulator designed to modulate the tumor microenvironment through the delivery of the potent immune agent IL-12 into the peritoneal cavity in a local and persistent manner.
  - IL-12 shifts the tumor microenvironment from immune suppressive to immune activation.
  - GEN-1 immunotherapy results in the loco-regional production of the potent cytokine IL-12 avoiding toxicities and poor pharmacokinetics associated with systemic recombinant IL-12 protein; lasts up to one week; Dosing can be repeated making GEN-1 immunotherapy ideal for long-term maintenance therapy.

- **Premal H. Thaker, M.D.**, Associate Professor in Gynecologic Oncology, Washington University School of Medicine, St. Louis, Missouri presented the final clinical data from the Phase Ib dose-escalating OVATION Study:
  - Neoadjuvant treatment approach to ovarian cancer has been gaining greater support over the last few years due to safety benefits; Addition of GEN-1 to neoadjuvant chemotherapy was safe and well tolerated.
  - The R0 margin negative resection score in 64% of patients treated in the OVATION Study appeared to be higher than what you see with neoadjuvant chemotherapy alone; R0 score of 100% in the highest dose group is impressive.
  - Progression Free Survival (PFS) of over 14 months in the as-treated patient population is on a positive trend since only 2 out of 16 patients have progressed to-date.
  - The patient population in the OVATION Study was highly advanced (94% at Stage IIIC - IV); better results are anticipated in a mixed population trial.

- **Richard C. Koya, M.D., Ph.D.**, Associate Professor of Oncology and Immunology, Director of the Vector Development & Production Facility, Associate Director of the Center for Immunotherapy, Roswell Park Cancer Institute, Center for Immunotherapy, Buffalo, NY presented the following translational research data from the OVATION Study:
  - GEN-1 treatment when administered in combination with standard of care increased the levels of immune-stimulatory cytokines and tumor infiltrating lymphocytes in a manner that is consistent with the known actions of IL-12.
  - There is evidence of GEN-1 activity on T-cell numbers as well as T-cell function. A dose-dependent increase in IFN-gamma, a strong mediator of immune response, following the treatment is impressive. Significant reduction in angiogenic growth factor, VEGF, is also a good indicator of the IL-12 treatment effect.
  - The decrease in immune suppressive signals and the increase in the ratio of cytotoxic CD8+ cells to immune suppressive signals suggest a shift in tumor environment in favor of immune stimulation. A highly immune suppressive tumor environment is linked with a worsening of the disease and poor treatment outcome. A shift in the tumor microenvironment in favor of immune stimulation following GEN-1 treatment is a positive indication

of the IL-12 treatment effect.

- The modulation of tumor microenvironment in favor of immune stimulation by GEN-1 raises its potential combination benefits with other forms of immunotherapies, especially adoptive T-cell therapy. GEN-1 pre-treatment has potential to improve the survival and potency of the engineered T-cells, a major limitation in adoptive T-cell therapies.

About the OVATION Study

The Phase Ib trial was designed to evaluate weekly intraperitoneal dosing of GEN-1 in combination with neoadjuvant chemotherapy, the standard of care for patients newly diagnosed with ovarian cancer. Concurrently with neoadjuvant chemotherapy, enrolled patients will receive escalating weekly doses of GEN-1, from levels beginning at 36mg/m², to 47mg/m², 61mg/m² and 79mg/m² weekly for 8 treatments in total, with interval debulking surgery to follow. The regimen was primarily evaluated for its safety and tolerability. GEN-1, designed using Celsion's proprietary TheraPlas platform technology, is an IL-12 DNA plasmid vector encased in a nanoparticle delivery system, which enables cell transfection followed by persistent, local secretion of the IL-12 protein. IL-12 is one of the most active cytokines for the induction of potent anti-cancer immunity acting through the induction of T-lymphocyte and natural killer (NK) cell proliferation.

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. For more information on Celsion, visit our website: http://www.celsion.com. (CLSN-G1 CLSN-OV)

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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