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Endocyte Presents Data at AACR Identifying Multiple Methods for Managing Severe Side Effects Resulting from CAR T-Cell Treatment

- Late-breaking poster demonstrates that Endocyte's bi-specific adaptor molecules can mitigate or eliminate cytokine storms -

- Potential to meaningfully improve the safety and tolerability of CAR T-cell therapies -

WEST LAFAYETTE, Ind., April 05, 2017 (GLOBE NEWSWIRE) -- Endocyte, Inc. (NASDAQ:ECYT), a leader in developing targeted small molecule drug conjugates (SMDCs) and companion imaging agents for personalized therapy, today announced in a late-breaking poster session the presentation of new research from investigators and faculty at the Purdue University Center for Drug Discovery on the application of Endocyte's SMDC technology in a chimeric antigen receptor (CAR) therapy setting (Poster #LB-187 - New Methods for Controlling CAR T Cell-mediated Cytokine Storms) at the American Association for Cancer Research (AACR) Annual Meeting 2017 in Washington D.C.

"The significant potential of CAR T-cell therapies has been limited by an inability to control the rate and degree of cytokine release, which can cause severe safety issues in patients. The data presented demonstrate approaches that may successfully mitigate these cytokine storms and highlight how Endocyte's bi-specific SMDC adaptors can potentially improve the safety and tolerability profiles of current CAR T-cell therapies," said Mike Sherman, president and CEO at Endocyte. "This is just one example of how we are continuing to advance our next-generation CAR T-cell therapeutic platform, now also in collaboration with leading experts in the field at Seattle Children's Research Institute."

This presentation discusses methods in which Endocyte's bi-specific SMDC adaptors can control the rate and extent of CAR T-cell activation, by using a bispecific adaptor molecule to mediate engagement of the CAR T-cell with the cancer cell. Endocyte's unique bispecific adaptors are constructed with a fluorescein isothiocyanate (FITC) molecule and a tumor-homing molecule to precisely bridge a universal CAR T-cell with the cancer cells, which causes localized T-cell activation. This approach enables a universal CAR T-cell to bind and kill a cancer cell only when the bispecific adaptor establishes a bridge between the two. The poster explores several novel strategies for regulating cytokine storms, including: 1) interruption of bi-specific adaptor administration, 2) injection of excess folate to block/compete bi-specific adaptor bridging of the CAR T-cell to the cancer cell, 3) use of a very low or very high dose of the bi-specific adaptor and 4) gradual escalation of bi-specific adaptor dose. Since the circulation half-life of most bi-specific adaptors is approximately 30 minutes, unwanted toxicity from CAR T-cell induced cytokine storms can be either pre-emptively prevented or rapidly suppressed following their emergence. Data in this poster demonstrate in pre-clinical models that all of the above strategies mitigate or eliminate cytokine storms.

"We are very pleased with the results of these studies, as they confirm our hypothesis that the use of bi-specific SMDC adaptors can offer a next-generation approach to CAR T-cell therapy. We look forward to continuing our research, including exploring the ability of this approach to more completely target cells in heterogeneous solid tumors," said Phil Low, Ph.D., professor of chemistry and director of the Center for Drug Discovery at Purdue University. Dr. Low is the chief scientific officer, a board member and founder of Endocyte.

Endocyte and Purdue University have exclusive agreements to research, develop and commercialize SMDC therapeutics and companion imaging agents for the treatment of disease through a long-standing partnership with Dr. Low and Purdue University. Those agreements grant Endocyte exclusive rights to the CAR T-cell and SMDC adaptors for all indications. This technology is jointly-owned by Endocyte and Purdue, and covered by pending patent applications.

About Endocyte's SMDC Bi-Specific Adaptors

Endocyte's SMDC bi-specific adaptors represent a novel approach that makes possible the engineering of a single universal CAR T-cell, designed to bind with high affinity to FITC. This universal CAR T-cell can be specifically directed to cancer cells through the administration of a tumor targeted FITC-containing SMDC, known as a bi-specific adaptor that acts to bridge the universal CAR T-cell with the cancer cells to cause localized T-cell activation. This approach has been shown pre-clinically to address three key CAR T-cell issues by: (i) avoiding hyper-activation of CAR T-cells leading to a cytokine storm, (ii) enabling termination of CAR T-cell activity upon eradication of the tumor, and (iii) potentially enabling elimination of all cancer cells in heterogeneous solid tumors. In March 2017, Endocyte entered into a research collaboration with Seattle Children's Research Institute and Dr. Michael Jensen for the development of Endocyte's SMDC platform in CAR T-cell immunotherapy setting through the use of Endocyte's proprietary SMDC bi-specific adaptor molecules.

About Endocyte

Endocyte is a biopharmaceutical company and leader in developing targeted therapies for the treatment of cancer and other serious diseases. Endocyte uses its proprietary drug conjugation technology to create novel SMDCs and companion imaging agents for personalized targeted therapies. The company's SMDCs actively target receptors that are over-expressed on diseased cells, relative to healthy cells. This targeted approach is designed to enable the treatment of patients with highly active drugs at greater doses, delivered more frequently and over longer periods of time than would be possible with the untargeted drug alone. The companion imaging agents are designed to identify patients whose disease over-expresses the target of the therapy and who are therefore more likely to benefit from treatment. For additional information, please visit Endocyte's website at www.endocyte.com.

Endocyte Forward-Looking Statement

Certain of the statements made in this press release are forward looking, such as those relating to the company's development programs and upcoming milestones. Actual results or developments may differ materially from those projected or implied in these forward-looking statements. Factors that may cause such a difference include risks that the company may experience delays in the completion of its clinical trials (whether caused by competition, adverse events, patient enrollment rates, shortage of clinical trial materials, regulatory issues or other factors); risks that data from its clinical trials may not be indicative of subsequent clinical trial results; risks related to the safety and efficacy of the company's product candidates; risks that early stage preclinical data may not be indicative of subsequent data when expanded to additional preclinical models or to subsequent clinical data; risks that evolving competitive activity and intellectual property landscape may impair the company's ability to capture value for the technology; estimates of the potential markets for its product candidates; estimates of the capacity of manufacturing and other facilities required to support its product candidates; projected cash needs; and expected future revenues, operations, expenditures and cash position. More information about the risks and uncertainties faced by Endocyte, Inc. is contained in the company's periodic reports filed with the Securities and Exchange Commission. Endocyte, Inc. disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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