

June 15, 2016



Cellecstar Biosciences Announces Results of In Vivo Study Demonstrating PDC Platform Delivery of Paclitaxel to be Superior in Tumor Targeting to Free Paclitaxel

CLR 1602 Tumor Selectivity Shown to be Approximately 30 Times Greater than Paclitaxel Alone

MADISON, Wis., June 15, 2016 (GLOBE NEWSWIRE) -- Cellecstar Biosciences, Inc. (Nasdaq:CLRB) ("the company"), an oncology-focused biotechnology company, today announces the results of a preliminary tumor-targeting study that shows its prototype paclitaxel chemotherapeutic conjugate, CLR 1602, may be up to 30 times more tumor selective in comparison to free paclitaxel.

The preliminary *in vivo* study demonstrated that tumor uptake of CLR 1602's paclitaxel payload increased by more than 30-fold over free paclitaxel, and also displayed an extended plasma half-life relative to free paclitaxel. The extended plasma half-life may, in part, explain the enhanced tumor uptake. Unlike free paclitaxel, which was rapidly cleared from plasma within 24 hours, CLR 1602 displayed prolonged retention even at 96 hours.

"The study results are a significant signal in the development of our paclitaxel Phospholipid Drug Conjugates (PDCs). More importantly, it represents further validation of our entire CLR CTX program," said Jim Caruso, president and CEO of Cellecstar Biosciences. "These data clearly confirm our ongoing assertion that delivery of chemotherapeutics with our PDC platform may provide superior tumor cell targeting than chemotherapeutics alone, converting non-targeted chemotherapeutics into targeted cytotoxic agents. We anticipate conducting future studies and evaluating against other comparators, such as Abraxane™."

The study was designed to assess the pharmacokinetics, absorption, and distribution after a single intravenous administration of CLR 1602, (N=24) a paclitaxel PDC vs. free paclitaxel (N=24) in tumor bearing mice. In this biodistribution study, CLR 1602, a paclitaxel Cremophor EL-free formulation (formulated without Cremophor, which is believed to contribute to free paclitaxel adverse event profile), was compared to free paclitaxel at equivalent sub-therapeutic concentrations in an effort to demonstrate enhanced CLR 1602 tumor targeting vs. free paclitaxel.

"This promising new *in vivo* paclitaxel data further confirms the tumor targeting selectivity of our PDC carrier, which has been consistently observed with oncology therapeutics and imaging agents. With targeting confirmed we will now optimize the PDC linker with the aim

of enhancing the cytotoxic impact on cancer cells,” said Jamey Weichert, Ph.D., founder and chief scientific officer of Collectar Biosciences. “Furthermore, these results validate our ‘tool kit’ concept whereby carbon-14 labeled versions of our PDCs are utilized to quickly assess the potential tumor targeting enhancement that our PDC delivery system may afford to existing or new chemotherapeutic agents.”

These quantitative results comparing biodistribution of CLR 1602 vs. free paclitaxel will be the subject of a poster presented at the 35th National Medicinal Chemistry Symposium in Chicago, June 26-29. The company also anticipates further data to be presented at another conference later this year.

About Collectar Biosciences, Inc.

Collectar Biosciences is developing phospholipid drug conjugates (PDCs) designed to provide cancer targeted delivery of diverse oncologic payloads to a broad range of cancers and cancer stem cells. Collectar's PDC Delivery Platform is based on the company's proprietary phospholipid ether analogs. These novel small-molecules have demonstrated highly selective uptake and retention in a broad range of cancers. Collectar's PDC pipeline includes product candidates for cancer therapy and cancer diagnostic imaging. The company's lead therapeutic PDC, CLR 131, utilizes iodine-131, a cytotoxic radioisotope, as its payload. CLR 131 is currently being evaluated under an orphan drug designated Phase 1 study in patients with relapsed or refractory multiple myeloma. The company is actively developing PDCs for targeted delivery of chemotherapeutics such as paclitaxel (CLR 1602-PTX), a preclinical stage product candidate, and plans to expand its PDC chemotherapeutic pipeline through both in-house and collaborative R&D efforts. For additional information please visit www.collectarbiosciences.com

This news release contains forward-looking statements. You can identify these statements by our use of words such as "may," "expect," "believe," "anticipate," "intend," "could," "estimate," "continue," "plans," or their negatives or cognates. These statements are only estimates and predictions and are subject to known and unknown risks and uncertainties that may cause actual future experience and results to differ materially from the statements made. These statements are based on our current beliefs and expectations as to such future outcomes. Drug discovery and development involve a high degree of risk. Factors that might cause such a material difference include, among others, uncertainties related to the ability to raise additional capital, uncertainties related to the ability to attract and retain partners for our technologies, the identification of lead compounds, the successful preclinical development thereof, the completion of clinical trials, the FDA review process and other government regulation, our pharmaceutical collaborators' ability to successfully develop and commercialize drug candidates, competition from other pharmaceutical companies, product pricing and third-party reimbursement. A complete description of risks and uncertainties related to our business is contained in our periodic reports filed with the Securities and Exchange Commission including our Form 10-K for the year ended December 31, 2015. These forward-looking statements are made only as of the date hereof, and we disclaim any obligation to update any such forward-looking statements.

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Source: Cellestar Biosciences, Inc.