



Phase 1 Clinical Data Demonstrating CLR 124 Uptake in Brain Tumors Accepted for Oral Presentation at the 12th World Congress of the World Federation of Nuclear Medicine and Biology

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MADISON, Wis., March 06, 2018 (GLOBE NEWSWIRE) -- Cellecstar Biosciences (Nasdaq:CLRB), a clinical stage biopharmaceutical company focused on the discovery, development and commercialization of drugs for the treatment of cancer, announces that results from a Phase 1 study with ¹²⁴I-CLR1404, also known as CLR 124, demonstrating an ability to cross the blood brain barrier and achieve uptake in brain tumors will be presented in an oral presentation at the 12th World Congress of the World Federation of Nuclear Medicine and Biology taking place April 20-24, 2018 in Melbourne, Australia.

CLR 124 is the company's cancer-selective alkylphosphocholine analog, or Phospholipid Drug Conjugate (PDC), radiolabeled with iodine-124. This molecule is analogous to the company's lead asset CLR 131 which delivers therapeutic iodine in the form of iodine-131 rather than diagnostic iodine-124 to the tumors.

The oral presentation at the World Federation of Nuclear Medicine and Biology is titled: PET/CT Imaging of the Alkylphosphocholine Analog ¹²⁴I-CLR1404 in Brain Tumors.

"These Phase 1 data suggest that CLR124 is able to cross the blood-brain barrier and enter brain tumor cells, an important property for both diagnostic and therapeutic compounds. This may have positive read-through for CLR 131, our analogous molecule that uses I-131 for therapy. We plan to initiate a Phase 1 pediatric study in cancers including pediatric high-grade gliomas and malignant brain tumors in the near future," said James Caruso, chief executive officer of Cellecstar Biosciences.

Cellecstar's research programs have generated numerous PDC molecules that in preclinical studies show significant improvement in pharmacologic and biologic activity versus the parent or payload molecule alone. Cellecstar has engineered these new PDC compounds specifically for improved tumor targeting. Our research has demonstrated that with a variety of payloads the phospholipid ether (PLE) molecules provide, on average, a greater than 20-fold increase in delivery of the PDC to cancerous cells compared to normal cells. This mechanism provides a significant opportunity to potentially increase efficacy and reduce the off-target impact and associated side effects of many chemotherapeutics.

The chemical structure of CLR 124 is analogous to CLR 131. CLR 131 is an investigational radioiodinated PDC cancer therapy that exploits the tumor-targeting properties of the company's proprietary PLEs and PLE analogs to selectively deliver radiation to malignant tumor cells, thus minimizing radiation exposure to normal tissues.

"Earlier studies have demonstrated avid uptake of CLR 124 and CLR 131 in a broad spectrum of preclinical tumor models. It is exciting to have our preclinical research corroborated with these clinical results in human brain tumors," noted John Friend, MD, chief medical officer of Cellecstar. "Importantly, the demonstration of the PDCs ability to access the brain with a systemically-administered compound and achieve strong uptake in brain tumors, underscores the potential of our PDC platform technology to selectively deliver oncologic payloads to highly restricted compartments within the body."

About the Phase 1 Clinical Study of CLR 131 in Pediatric Brain Cancers:

The Phase 1 clinical trial of CLR 131 is an open-label, sequential-group, dose-escalation study to evaluate the safety and tolerability of a single intravenous administration of CLR 131 in up to 30 children and adolescents with cancers including neuroblastoma, sarcomas, lymphomas (including Hodgkin's lymphoma) and malignant brain tumors.

About Phospholipid Drug Conjugates™

Cellecstar's product candidates are built upon a patented delivery and retention platform that utilizes optimized phospholipid ether-drug conjugates (PDCs™) to target cancer cells. The PDC platform selectively delivers diverse oncologic payloads to cancerous cells and cancer stem cells, including hematologic cancers and solid tumors. This selective delivery allows the payloads' therapeutic window to be modified, which may maintain or enhance drug potency while reducing the number and severity of adverse events. This platform takes advantage of a metabolic pathway utilized by all tumor cell types in all cell cycle stages. Compared with other targeted delivery platforms, the PDC platform's mechanism of entry does not rely upon specific cell surface epitopes or antigens. In addition, PDCs can be conjugated to molecules in numerous ways, thereby increasing the types of molecules selectively delivered. Cellecstar believes the PDC platform holds potential for the discovery and development of the next generation of cancer-targeting agents.

About Cellecstar Biosciences, Inc.

Cellecstar Biosciences is focused on the discovery, development and commercialization of drugs for the treatment of cancer. The company plans to develop proprietary drugs independently and through research and development (R&D) collaborations. The core drug development strategy is to leverage our PDC platform to develop therapeutics that specifically target treatment to cancer cells. Through R&D collaborations, the company's strategy is to generate near-term capital, supplement internal resources, gain access to novel molecules or payloads, accelerate product candidate development and broaden our proprietary and partnered product pipelines.

The company's lead PDC therapeutic, CLR 131, is in a Phase 1 clinical study in patients with relapsed or refractory (R/R) multiple myeloma (MM) and a Phase 2 clinical study in R/R MM and a range of B-cell malignancies. In 2018 the company plans to initiate a Phase 1 study with CLR 131 in pediatric solid tumors and lymphoma, and a second Phase 1 study in combination with external beam radiation for head and neck cancer. The company's product pipeline also includes two preclinical PDC chemotherapeutic programs (CLR 1700 and 1900) and partnered assets include PDCs from multiple R&D collaborations.

For more information please visit www.cellectar.com.

Forward-Looking Statement Disclaimer

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, 2016. These forward-looking statements are made only as of the date hereof, and we disclaim any obligation to update any such forward-looking statements.

CONTACT:

LHA Investor Relations
Anne Marie Fields
212-838-3777
afields@lhai.com

 [Primary Logo](#)

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