August 22, 2017

Cellectar Biosciences Announces Significant PDC Platform Advancement; Demonstrates Potential to Improve Therapeutic Window

MADISON, Wis., Aug. 22, 2017 (GLOBE NEWSWIRE) -- Cellectar Biosciences, Inc. (Nasdaq:CLRB), an oncology-focused, clinical stage biotechnology company (the "company"), today announces that its Phospholipid Drug Conjugate research program has generated numerous PDC molecules that show significant improved pharmacologic activity versus the payload molecule alone.

Utilizing a selection of novel linkers to attach proprietary cytotoxic molecules to the company's PDC platform, Cellectar has formulated new compounds specifically designed for improved tumor targeting and fewer off-target adverse effects. The research has demonstrated that with a variety of payloads, the phospholipid ether molecules provide, on average, a greater than 20-fold increase in delivery of the PDC to cancerous cells.

To date, the company's research has demonstrated that the conjugated molecules are inactive until cleavage of the payload from the phospholipid ether. This mechanism provides significant opportunity to reduce the off-target impact and associated side effects of many chemotherapeutics. These data show greater than 500-fold dilution separation between effects in tumor cells and effects in normal cells, and that this separation can be controlled by the linker chemistry. Importantly, the company has also been able to show that its novel linker chemistry allows for the payload to be selectively cleaved within the tumor cells, resulting in significant potency.

"The rapid advancement and positive data from these research programs, coupled with our ongoing collaborations, further validate the unique capabilities and broad utility of our PDC platform," said Jim Caruso, president and CEO of Cellectar Biosciences. "We continue to drive our key internal programs in a strategic and cost-efficient manner including the advancement of candidate molecules from these new compound series. The company anticipates sharing additional technical details of this work either in peer reviewed journal articles or at a future oncology conference."

Cellectar is currently developing internal PDC programs, such as its CLR 131 clinical program and its preclinical programs, CLR 1700 and CLR 1900 series. Additionally, the platform is the basis of two strategic collaborations with Pierre Fabre and Avicenna Oncology.

About Phospholipid Drug Conjugates (PDCs)
Cellectar's product candidates are built upon its patented cancer cell-targeting delivery and retention platform of optimized phospholipid ether-drug conjugates (PDCs). The company

deliberately designed its phospholipid ether (PLE) carrier platform to be coupled with a variety of payloads to facilitate both therapeutic and diagnostic applications. The basis for selective tumor targeting of our PDC compounds lies in the differences between the plasma membranes of cancer cells compared to those of normal cells. Cancer cell membranes are highly enriched in lipid rafts, which are glycolipoprotein microdomains of the plasma membrane of cells that contain high concentrations of cholesterol and sphingolipids, and serve to organize cell surface and intracellular signaling molecules. PDCs have been tested in more than 80 different xenograft models of cancer.

About CLR 131
CLR 131 is an investigational compound under development for a range of hematologic malignancies. It is currently being evaluated as a single-dose treatment in a Phase 1 clinical trial in patients with relapsed or refractory (R/R) multiple myeloma (MM) as well as in a Phase 2 clinical trial for R/R MM and select R/R lymphomas with either a one- or two-dose treatment. CLR 131 represents a novel approach to treating hematological diseases and based upon preclinical and interim Phase 1 study data may provide patients with therapeutic benefits including, overall survival, an improvement in progression-free survival, and overall quality of life. CLR 131 utilizes the company's patented PDC tumor targeting delivery platform to deliver a cytotoxic radioisotope, iodine-131, directly to tumor cells. The FDA has granted Cellectar an orphan drug designation for CLR 131 in the treatment of multiple myeloma.

About Cellectar Biosciences, Inc.
Cellectar 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. Cellectar's PDC 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, even sites of metastases. The company's lead therapeutic PDC, CLR 131, utilizes iodine-131, a cytotoxic radioisotope, as its payload. CLR 131 has been designated as an orphan drug by the US FDA and is currently being evaluated in a Phase 1 clinical study in patients with relapsed or refractory multiple myeloma and a Phase 2 clinical study to assess efficacy in a range of B-cell malignancies. The company is also developing proprietary PDCs for targeted delivery of chemotherapeutics and has several preclinical stage product candidates, and plans to expand its PDC chemotherapeutic pipeline through both in-house and collaborative R&D efforts. For more information please visit www.cellectar.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, 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.

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Source: Cellectar Biosciences, Inc.