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New Preclinical Data Suggest That Cellecstar Biosciences' PDC Platform Provides Enhanced Outcomes in Combination with External Radiation

MADISON, Wis., Oct. 30, 2017 (GLOBE NEWSWIRE) -- Cellecstar Biosciences, Inc. (Nasdaq:CLRB) (the "company"), an oncology-focused, clinical stage biotechnology company, today announces data demonstrating that the company's phospholipid ether delivery vehicle conjugated to a non-reactive iodine (I-127), or CLR 127, decreased tumor volumes and markedly delayed tumor regrowth in preclinical *in vitro* and *in vivo* animal studies of both pediatric and adult cancers.

Investigators observed that CLR 127 was taken up and retained in the tumor cells at 6-10 fold higher level than normal tissue and sensitized the tumor cells to external radiation.

University of Wisconsin investigator, Dr. Mario Otto presented these data during a poster presentation held at the International Conference on Molecular Targets and Cancer Therapeutics held by the American Association for Cancer Research, National Cancer Institute and European Organisation for Research and Treatment of Cancer. The poster, titled "The Phospholipid Ether Analog CLR 127 Delays Radiation-Induced dsDNA Damage Repair in Pediatric and Adult Solid Tumors," was presented on Saturday, October 28th at 12:30 PM ET at the Pennsylvania Convention Center in Philadelphia.

Dr. Otto and his fellow investigators treated adult and pediatric cancer cells and *in vivo* xenograft-bearing mice with CLR 127 followed by external radiation. The group reported that the effect of the radiation was meaningfully increased versus external radiation alone and persisted at higher levels for up to 24 hours post-administration of the external radiation. Additionally, treatment with CLR 127 appears to inhibit DNA repair function that typically occurs in the tumor cells following radiation treatment.

"The data presented by Dr. Otto and his team provide external confirmation of Cellecstar's PDC tumor targeting capabilities and retention in the tumor cells that may improve clinical outcomes," said Jim Caruso, president and CEO of Cellecstar Biosciences. "This study reports important additional data regarding the potential benefits of combining our PDC platform with external beam radiation for the treatment of both adults and pediatric cancers."

About Phospholipid Drug Conjugates™ (PDCs™)

Cellecstar's product candidates are built upon its patented cancer cell-targeting delivery and retention platform of optimized phospholipid ether-drug conjugates™ (PDCs™). The company designed its phospholipid ether (PLE) carrier platform to be coupled with a variety of payloads to facilitate the discovery and development of improved targeted novel therapeutic compounds. 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 Cellecstar Biosciences, Inc.

Cellecstar Biosciences (Nasdaq:CLRB) 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. Cellecstar'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.cellecstar.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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