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Cellecstar Biosciences Signs Collaboration with Avicenna Oncology to Develop New PDCs for Solid Tumors

MADISON, Aug. 01, 2017 (GLOBE NEWSWIRE) -- Cellecstar Biosciences, Inc. (Nasdaq:CLRB), an oncology-focused, clinical stage biotechnology company (the "company"), today announces the initiation of a collaboration with Avicenna Oncology GmbH, a leading precision medicine company based in Basel, Switzerland. The collaboration will focus on the development of new phospholipid drug conjugates (PDCs) combining Cellecstar's patented phospholipid ether delivery platform with Avicenna's novel cytotoxic payloads (potent anti-cancer small molecules).

"We believe the combination of our targeted PDC delivery with Avicenna's proprietary payloads has tremendous potential for the development of selective therapeutics for patients suffering with cancer," said Jim Caruso, president and CEO of Cellecstar Biosciences. "This collaboration further validates the utility of our PDC delivery platform to provide targeted treatment of various resistant cancers, expands and accelerates our conjugate program research and potentially increases our novel, small molecule PDC pipeline."

Under the terms of the research collaboration, Avicenna will provide their novel payloads to Cellecstar, which will leverage its expertise in chemical conjugation to link the molecules to its phospholipid ether (PDC platform). Cellecstar will oversee the *in vitro* and *in vivo* testing of these molecules alongside an antibody drug conjugate (ADC) with the same payload. Both companies will have the option to advance the development of any of the newly conjugated molecules (PDCs). Financial terms of the collaboration have not been disclosed.

"There remains a significant unmet medical need for providing patients with new generations of targeted treatments with improved therapeutic index. Combining Cellecstar's PDC platform with our payloads is a very promising approach that could potentially overcome some of the disadvantages presently seen with ADCs," said Zaki Sellam, MSc, MBA, founder and CEO of Avicenna Oncology. "In line with our common vision, we are very excited to combine our collective expertise to potentially provide new treatment options for patients"

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 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 Cellecstar Biosciences, Inc.

Cellecstar 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. 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. Cellecstar'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 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.

About Avicenna Oncology GmbH

Based in Basel, Switzerland, Avicenna Oncology was founded with the purpose of combining precision medicine with drug conjugates to treat resistant cancers. Led by an experienced team and funded by serial entrepreneurs, the company builds on its international network of collaborations and promising programs to overcome the limitations of current chemotherapies and targeted therapeutics for which many cancers have developed resistance mechanisms. For more information please visit www.avicenna-oncology.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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