Cyteir Therapeutics Secures $29 Million Series B to Advance Novel, Molecularly Targeted Therapies for Cancer and Autoimmune Diseases

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Lead investor Venrock joined by Celgene, Lightstone and DROIA. Markus Renschler, M.D., joins as CEO, from Celgene. Financing proceeds will be used to advance RAD51 inhibitor toward the clinic and expand small-molecule synthetic lethality platform for oncology and autoimmune diseases. Company expects to enter clinical trials in 2019.

CAMBRIDGE, Mass., March 8, 2018 – Cyteir Therapeutics, a leader in the discovery and development of novel therapeutics based on the biology of DNA repair and synthetic lethality for the treatment of cancer and autoimmune diseases, today announced the close of a $29 million Series B preferred stock financing. Venrock led the round and was joined by returning investors including Celgene, along with new investors Lightstone Ventures and DROIA Oncology Ventures. Proceeds from the financing will be used to progress the company's lead program focused on selective, small-molecule inhibitors of the protein RAD51 for use in oncology, with the goal of entering initial clinical trials in 2019. Proceeds will also be used to accelerate preclinical development of synthetic lethality therapeutics for autoimmune diseases.

Cyteir also announced the appointment of Markus Renschler, M.D., as president and chief executive officer. Dr. Renschler, a medical oncologist and biopharmaceutical industry veteran, most recently served as Celgene's senior vice president, global head of Hematology and Oncology Medical Affairs. In this role, he set worldwide medical strategy for the launches of blockbuster hematology and oncology drugs, including Revlimid®, Pomalyst®/Imnovid®, and Abraxane®. At Celgene, Dr. Renschler also led the clinical development of Abraxane for worldwide registration in pancreatic cancer and lung cancer.

Cyteir's team also includes co-founder, Kevin Mills, Ph.D., who serves as the company's chief scientific officer. Dr. Mills is a globally recognized leader in genomic instability and DNA repair research and translation. He was previously an associate professor at The Jackson Laboratory, where his research led to the groundbreaking discovery of the relationship between activation-induced cytidine deaminase (AID), a DNA-damaging enzyme, and RAD51, which is essential to repair of AID-induced DNA damage.

"The interest in this Series B financing reflects the growing excitement around our unique approach to synthetic lethality, and recognizes our leadership in the biology of DNA repair. We are applying synthetic lethality in a new way to treat a wider range of cancers and, for the first time, autoimmune diseases," said Dr. Renschler. "With this financing in hand, we will quickly advance into the clinic with our lead candidate and hope to demonstrate meaningful benefit for patients with high unmet medical needs."

Synthetic lethality is based on the premise that diseased cells, such as those in many cancers or

autoimmune disorders, have much greater levels of DNA damage than healthy cells, and therefore more acutely rely on DNA repair for their survival and growth. Reducing the ability of diseased cells to self-repair causes them to become overwhelmed by their own DNA damage and to undergo cell death –resulting in the therapeutic effect known as “synthetic lethality.”

Cyteir is the first and, to date, only company pursuing a “gain-of-function” approach to synthetic lethality. In contrast to other approved synthetic lethality therapies (i.e., PARP inhibitors), which are used to treat cancers with DNA mutations that cause loss-of-function in specific genes (such as BRCA), Cyteir is targeting diseases with a gain-of-function in AID. Abnormal gain of AID function occurs in a wide range of cancer cells and autoimmune diseases, but not in healthy tissues. The advantages of this gain-of-function approach include potentially broader applicability, reduced side effects, and simpler, sensitive companion diagnostics for patient selection.

“Not since the early PARP BRCA work have we seen as potent a synthetic lethal relationship as AID-RAD51. Cyteir’s highly respected and experienced team is leading the way in the discovery and development of groundbreaking new synthetic lethal therapies that have the potential to provide meaningful clinical benefit to patients across a spectrum of diseases,” said Racquel Bracken, vice president at Venrock.

In order for RAD51 to repair AID-induced DNA damage, it must be transported from the cytoplasm of the cell into the nucleus. Once in the nucleus, RAD51 repairs the DNA damage caused by AID, and thereby protects diseased cells and tissues from death. Following DNA repair, RAD51 is transported back to the cytoplasm, where it is stored for future use. Pre-clinical in vivo studies with Cyteir’s lead small-molecule drugs have demonstrated that inhibiting this RAD51 transport cycle in AID-positive cancer cells is effective and highly selective, leading to cancer cell death and tumor responses with minimal side effects.

Cyteir is prioritizing the treatment of tumors and autoimmune diseases with a high frequency of AID-positive patients. AID overexpression is particularly prominent in B-cell cancers such as lymphoma, as well as acute and chronic lymphocytic leukemia. The company is pursuing both blood cancers and solid tumors, and has demonstrated preclinical efficacy in multiple cancer models. Cyteir also is pursuing application of the company’s platform in autoimmune diseases such as systemic lupus erythematosus and multiple sclerosis.

Additional Leadership Changes

As part of the financing, Racquel Bracken, vice president at Venrock, Jean George, general partner at Lightstone, and Bart Van Hooland, managing partner at DROIA, joined the Cyteir Board of Directors. Maria Palmisano, M.D., of Celgene joined as a board observer.

About Cyteir Therapeutics

Cyteir Therapeutics is a leader in the discovery and development of novel therapeutics based on the biology of DNA repair and synthetic lethality for the treatment of cancer and autoimmune diseases. The company’s initial approach takes advantage of the “gain-of-function” from DNA damage overload to induce selective self-destruction of cells by targeting disease-induced RAD51 transport. Cyteir’s lead molecules were initially discovered using the company’s drug discovery platform, which enables identification of primary cells with tunable genetic constraints. Cyteir is backed by leading healthcare

investors, including Celgene, Lightstone Ventures and DROIA Oncology Ventures. For more information, visit www.cyteir.com.

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