Baylor College of Medicine Presents eFFECTOR Therapeutics-Backed Preclinical Data Supporting Development of Zotatifin in Triple-Negative Breast Cancer at 2021 AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

October 7, 2021

- Demonstrated statistically significant anti-tumor activity and inhibited proliferative and stem-cell signaling pathways
- Induced beneficial changes in the tumor microenvironment by increasing production of proteins involved in interferon- α and interferon- γ pathways
- Demonstrated statistically significant increases in survival when combined with carboplatin and everolimus (mTOR inhibitor)

SAN DIEGO, Oct. 07, 2021 (GLOBE NEWSWIRE) -- eFFECTOR Therapeutics (NASDAQ: EFTR), a leader in the development of selective translation regulator inhibitors (STRIs) for the treatment of cancer, in collaboration with investigators at Baylor College of Medicine, today announced the presentation of new positive data for zotatifin in animal models of triple-negative breast cancer (TNBC) at the 2021 AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. Zotatifin is a potent and sequence-selective inhibitor of eukaryotic translation initiation factor 4A (eIF4A) mediated translation.

The study authors found that blocking eIF4A in *p53*-null models of mouse mammary tumorigenesis with zotatifin results in tumor control via both tumor-intrinsic mechanisms as well as activation of host immune response. This activity is further potentiated with the addition of chemotherapy. The presentation entitled, “The RNA helicase EIF4A is a therapeutic vulnerability in triple-negative breast cancer,” was presented by Na Zhao, Ph.D., postdoctoral associate in the Jeffrey Rosen Lab, Department of Molecular and Cellular Biology, Baylor College of Medicine, in an oral session.

“Successful cancer treatments usually require combinations with standard-of-care chemo- and immunotherapies,” said Jeffrey Rosen, Ph.D., Professor, Department of Molecular and Cellular Biology, Baylor College of Medicine. “Resistance is also a major problem observed with single agents. We are excited to employ the TNBC models developed in our laboratory for these important preclinical studies that we hope will lead to the next generation of clinical trials.”

In the study, zotatifin treatment slowed tumor growth in six out of eight syngeneic TNBC models without apparent toxicity. Zotatifin treatment was also shown to inhibit proliferative and stem cell signaling pathways including E2F targets, G2/M checkpoints, as well as NOTCH signaling, and induce proteins involved in Interferon-α and Interferon-γ responses. Additionally, combination treatment of zotatifin with the mTOR inhibitor everolimus demonstrated statistically significant prolonged survival compared to use of these agents alone.

“We are pleased to present these highly encouraging data through our partnership with researchers at Baylor College of Medicine that support continued advancement of zotatifin in solid tumor indications, including triple negative breast cancer,” said Steve Worland, Ph.D., president and CEO of eFFECTOR. “We believe zotatifin may have therapeutic benefit in this difficult-to-treat subset of breast cancer patients, particularly in combination with other FDA-approved agents.”

About eFFECTOR Therapeutics

eFFECTOR is a clinical-stage biopharmaceutical company focused on pioneering the development of a new class of oncology drugs referred to as STRIs. eFFECTOR’s STRI product candidates target the eIF4F complex and its activating kinase, mitogen-activated protein kinase interacting kinase (MNK). The eIF4F complex is a central node where two of the most frequently mutated signaling pathways in cancer, the PI3K-AKT and RAS-MEK pathways, converge to activate the translation of select mRNA into proteins that are frequent culprits in key disease-driving processes. Each of eFFECTOR’s product candidates is designed to act on a single protein that drives the expression of multiple functionally related proteins, including oncoproteins and immunosuppressive proteins in T cells, that together control tumor growth, survival and immune evasion. eFFECTOR’s lead product candidate, tomivosertib, is a MNK inhibitor currently being evaluated in KICKSTART, a randomized, double-blind, placebo-controlled Phase 2b trial of tomivosertib in combination with pembrolizumab in patients with metastatic non-small cell lung cancer (NSCLC). Zotatifin, eFFECTOR’s inhibitor of eIF4A, is currently being evaluated in Phase 2a expansion cohorts in certain biomarker-positive solid tumors, including ER+ breast cancer and KRAS-mutant NSCLC. eFFECTOR has a global collaboration with Pfizer to develop inhibitors of a third target, eIF4E. In addition to the company’s oncology focus, zotatifin is being evaluated as a potential host-directed anti-viral therapy in patients with mild to moderate COVID-19 in collaboration with the University of California, San Francisco, under a $5 million grant sponsored by the Defense Advanced Research Projects Agency.

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