Edison Oncology Presents Two Posters at the 2025 AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

Novel targeted therapies for ARID1A-mutant and CDA-resistant cancers highlighted

The presentations showcased Edison Oncology's advancements in precision oncology, including EO3001, a targeted therapy for ARID1A-mutant cancers, and EO4426, a brain-penetrant dual inhibitor of DNA polymerase alpha (Pol α) and ribonucleotide reductase (RNR).

EO3001: Edison Oncology's presentation "*EO3001: A novel agent for ARID1A-mutant cancers*," highlights the potential of EO3001 as a first-in-class targeted therapeutic for ARID1A-mutant cancers. ARID1A mutations are among the most common genetic alterations in ovarian clear cell carcinoma (OCCC) and other solid tumors. ARID1A mutations disrupt chromatin remodeling and lead to metabolic vulnerabilities, including increased reliance on oxidative phosphorylation (OXPHOS) for survival.

EO3001 is a first-in-class small molecule designed to exploit metabolic vulnerabilities associated with *ARID1A* loss and dysregulated mitochondrial redox homeostasis. The compound selectively transports extracellular Cu(II) into mitochondria, where it promotes redox cycling and the generation of mitochondrial reactive oxygen species (ROS), leading to apoptotic cancer cell death driven by oxidative stress.

Preclinical studies demonstrate that EO3001 exhibits potent and selective cytotoxicity in *ARID1A*-deficient ovarian clear cell and endometrioid cancer models, consistent with enhanced reliance on oxidative phosphorylation (OXPHOS) in these tumors.

EO3001 builds upon an extensive prior clinical history of its parent pharmacophore, which has been evaluated in over 1,000 patients across multiple Phase 1 and 2 oncology trials, demonstrating a favorable tolerability profile and predictable pharmacokinetics. This established clinical foundation provides a strong safety margin and de-risked translational pathway for further development.

Together, these data position EO3001 as a precision oncology therapeutic targeting *ARID1A*-mutant and other OXPHOS-dependent malignancies. Biomarker-driven clinical studies are planned to further evaluate its therapeutic potential and define optimal patient selection strategies.

EO4426: Edison Oncology also presented an abstract titled *"Development Overview of EO4426: A Brain-Penetrant Dual DNA Polymerase α and Ribonucleotide Reductase Inhibitor,"* which details the clinical and preclinical evaluation of EO4426 in over 400 patients across multiple Phase 1 and Phase 2 trials.

EO4426 is a next-generation, orally bioavailable dual inhibitor of DNA polymerase-α and ribonucleotide reductase (RNR) designed to overcome mechanisms of resistance associated with cytidine analogs such as gemcitabine. Unlike gemcitabine, which requires intracellular phosphorylation and is rapidly inactivated by cytidine deaminase (CDA), EO4426 is structurally distinct and inherently resistant to CDA-mediated deamination.

High levels of CDA expression—common in pancreatic, lung, and certain hematologic malignancies—lead to accelerated catabolism of gemcitabine and other cytidine-based RNR inhibitors, resulting in reduced drug exposure and poor patient outcomes. In preclinical models with elevated CDA activity, EO4426 maintained robust anti-tumor efficacy where gemcitabine failed, demonstrating ~30-fold greater resistance to CDA-mediated degradation and sustained inhibition of DNA synthesis.

EO4426 has shown broad preclinical activity across both solid tumors and hematologic malignancies, including models of microsatellite instability (MSI) and RRM2 overexpression, with a favorable tolerability profile. Reversible neutropenia was identified as the primary dose-limiting toxicity, consistent with on-target RNR inhibition.

Collectively, these data position EO4426 as a first-in-class precision therapy targeting CDA-driven resistance mechanisms and replication-stress vulnerabilities in cancer, with forthcoming biomarker-guided clinical studies planned to evaluate its therapeutic potential, including in central nervous system (CNS) malignancies where CDA expression and nucleotide metabolism play key roles in treatment resistance.

“We are excited to present these new advances in precision oncology at AACR-NCI-EORTC,” said Jeffrey A. Bacha, lead author from Edison Oncology. “EO3001 and EO4426 represent significant progress in addressing some of the most challenging therapeutic targets in cancer. These findings highlight Edison’s commitment to developing first-in-class therapies that address major unmet medical needs in the treatment of cancer.”

The abstracts are available on the AACR-NCI-EORTC conference website.

About Edison Oncology

Edison Oncology is a clinical-stage biopharmaceutical company developing a pipeline of first-in-class, small-molecule, biomarker-driven therapies with potent anti-tumor activity. Leveraging existing clinical data and a modern understanding of cancer biology, Edison is addressing critical unmet needs in oncology. The company advances its programs through a capital-efficient combination of internal development and strategic partnerships, retaining meaningful development and commercial rights to maximize long-term value.

www.edisononcology.com

Contact

Brett Maas

Hayden IR

(646) 536-7331

brett@haydenir.com

James Carbonara

Hayden IR

(646)-755-7412

james@haydenir.com