

Devimistat (CPI-613[®]):

A First-in-Class Therapeutic Agent Targeting Cancer Cell Metabolism

What is devimistat?

- Devimistat is a first-in-class investigational small-molecule (lipoate analog) and is designed to target the mitochondria of cancer cells to disrupt their energy production, cutting off the fuel for disease growth.
- Devimistat is a promising drug molecule currently undergoing clinical trials for the treatment of solid tumors and is also studied in hematological cancers.
 These trials have demonstrated a favorable safety profile for the drug, indicating its potential for safe use in patients. Additionally, in preclinical models devimistat has exhibited a synergistic effect when combined with various standard-of-care treatments for different cancers, enhancing its therapeutic potential across different indications.
- Devimistat was granted 'Orphan Drug Designation' by the U.S. FDA for pancreatic cancer, Acute myeloid leukemia (AML), Burkitt's lymphoma, biliary tract cancer, soft tissue sarcoma, myelodysplastic syndrome (MDS) and peripheral Tcell lymphoma. Devimistat was granted 'Orphan Drug Designation' by EMA for biliary tract cancer, Burkitt's lymphoma pancreatic cancer, and AML.

Devimistat: Preclinical/ Clinical Trials

- 23 ongoing or completed clinical trials to date. Currently there are three ongoing trials and preclinical work in combination with telaglenastat and pembrolizumab ongoing for solid tumors.
- To date, over ~900 patients have received one or more doses of devimistat.
- Pre-clinical work for devimistat + pembrolizumab/ telaglenastat in HNSCC is ongoing.
- A preclinical work for devimistat, in combination with Taxol for patients with platinum resistant ovarian cancer is ongoing.
- A preclinical work for the combination of devimistat and teleglenastat in pancreatic cancer and biliary tract cancer is ongoing.
- Data readout for phase 2 study of devimistat in combination with gemcitabine and cisplatin in patients with biliary tract cancer is expected in Q4 2023.
- A phase 2 trial of devimistat, in combination with hydroxychloroquine + 5-fluorouracil/gemcitabine in patients with Chemo-refractory Solid Tumors is currently accruing patients.



Devimistat: Mechanism of Action

- CPI-613* (devimistat) is an analog of normally transient, acylated catalytic intermediate of the enzyme cofactor lipoate
- CPI-613* (devimistat) selectively decreases mitochondrial ATP synthesis of cancer cells by acting on pyruvate dehydrogenase and alpha-ketoglutarate dehydrogenase (two key lipoic acid-containing dehydrogenase complexes in tricarboxylic acid cycle)
- CPI-613* (devimistat) induces mitochondrial stress by activating a redox feedback loop
- > CPI-613[®] (devimistat) induces metabolic stress leading to apoptotosis and necrosis