CARNA BIOSCIENCES

News Release

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Carna Biosciences, Inc.

Carna presented a poster on monzosertib at AACR Annual Meeting

Carna Biosciences, a clinical-stage biopharmaceutical company focusing on the discovery and development of innovative therapies to treat serious unmet medical needs, presented new preclinical data on monzosertib (AS-0141) at the American Association for Cancer Research (AACR) Annual Meeting 2024 being held in San Diego, April 5-10, 2024.

Monzosertib is an investigational potent, selective, and orally bioavailable small molecule inhibitor of cell division cycle 7 (CDC7) kinase, currently in a Phase 1 clinical study in Japan in patients with advanced, metastatic, relapsed or refractory malignancies.

Acute myeloid leukemia (AML) is a cancer of the myeloid line of blood cells and progresses rapidly if left untreated. Despite recent progress in the treatment of hematologic malignancies, the overall outcome for patients with AML remains poor due to poor response to chemotherapy and limited therapeutic options in relapsed/refractory patients. Therefore, there is an urgent need to identify novel therapies for better outcomes in AML. The preclinical data presented in the poster demonstrates the antitumor efficacy of monzosertib alone against human AML cell lines. Monzosertib also demonstrated strong synergistic effects in combination with current therapies in AML models.

Key presentation highlights:

Poster title: Synergistic effect of the CDC7 inhibitor, monzosertib (AS-0141) with current therapies in AML models

- Monzosertib is a potent, selective, orally available inhibitor of CDC7.
- Monzosertib has a unique inhibitory mechanism for CDC7 (time-dependent inhibition).
- Monzosertib exhibited a potent anti-proliferative activity against various cancer cell lines, and AML cell lines were found to be highly sensitive to monzosertib.
- Combinations of monzosertib with azacitidine or decitabine exerted strong synergistic effects in human AML cell lines.
- In combination with venetoclax, monzosertib showed enhanced antiproliferative activity against AML cell lines, and demonstrated robust tumor growth inhibition in a MV-4-11 human AML xenograft model.
- Monzosertib is currently being evaluated in an open-label Phase 1 study in patients with advanced, metastatic, relapsed or refractory malignancies. The dose escalation part is ongoing in Japan.

About monzosertib (AS-0141)

CDC7 (cell division cycle 7) is a serine-threonine kinase that plays a critical role in DNA synthesis and is required for the activation of DNA replication origins throughout the S phase of the cell cycle. Inhibition of CDC7 in cancer causes lethal S phase or M phase progression, whereas normal cells survive, most likely through induction of cell cycle arrest at the DNA replication checkpoint. It has been reported in the literature that CDC7 is overexpressed in many types of cancers, therefore CDC7 is an attractive target for cancer drug development. Carna has successfully identified a selective and potent CDC7 inhibitor, monzosertib, with a unique mechanistic slow off-rate.

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