CARNA BIOSCIENCES

News Release

May 1, 2025
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 2025 held in Chicago, April 25-30, 2025.

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

The preclinical data presented in the poster demonstrates significant antitumor effects of monzosertib in triplet combinations with DNA methyltransferase (DNMT) inhibitors and B-cell/CLL lymphoma 2 (BCL-2) inhibitors in acute myeloid leukemia (AML) models.

Key presentation highlights:

Poster title: Triplet combination of monzosertib, a potent CDC7 inhibitor, with DNMT and BCL-2 inhibitors is highly active in human AML xenograft mouse models

- AML is a rare cancer, accounting for about 1% of all cancers. Venetoclax (BCL-2 inhibitor) + azacitidine (DNMT inhibitor) is a standard treatment for AML patients who are unfit for intensive chemotherapy. However, resistance to venetoclax + azacitidine combination therapy has become a major concern.
- This study aimed to evaluate the antitumor efficacy of a triplet therapy combining CDC7 inhibitor (monzosertib) + DNMT inhibitor (azacitidine/decitabine) + BCL-2 inhibitor (venetoclax) in human AML xenograft models.
- The triplet combination (monzosertib + venetoclax + azacitidine) showed higher synergistic effects compared with the doublet combination (venetoclax + azacitidine) in vitro studies.
- The triplet combination enhanced apoptosis through the DNA damage response.
- Monzosertib demonstrated significant antitumor effects in triplet combinations (monzosertib + venetoclax + azacitidine or decitabine) in human AML xenograft models.
- Monzosertib is currently being evaluated as monotherapy in an open-label Phase 1 study in patients with advanced, metastatic, relapsed or refractory malignancies (jRCT2031210072).
- Triplet therapy (monzosertib + venetoclax + azacitidine or decitabine) may provide enhanced efficacy for patients with AML.

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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