CARNA BIOSCIENCES

News Release

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Carna Biosciences, Inc.

Carna Announces Dosing of First Subject in Phase 1 Clinical Trial of AS-1763

Carna Biosciences, a clinical-stage biopharmaceutical company focusing on the discovery and development of innovative therapies to treat serious unmet medical needs, announces that the first subject has been dosed in its Phase 1 clinical trial for AS-1763, an investigational small molecule drug designed to non-covalently inhibit Bruton's tyrosine kinase (BTK) in a highly selective manner. Based on preclinical data, the compound is capable of potently inhibiting both wild and C481S mutant BTK, and AS-1763 is currently under development for treating patients with chronic lymphocytic leukemia (CLL) and other B cell malignancies with acquired resistance to covalent BTK inhibitors.

The Phase 1 clinical study of AS-1763 is a randomized, double-blind, placebo controlled, oral single ascending dose ("SAD") study in healthy male and female adult subjects. The SAD study is being conducted in up to 56 subjects in the Netherlands and will assess the safety and tolerability of AS-1763 and will include measurement of its pharmacokinetics and pharmacodynamics as a secondary endpoint (EudraCT 2020-005599-37). The first subject was dosed with AS-1763 on April 27(CEST) with various measures to secure the safety of volunteers and healthcare workers against COVID-19. Subsequently, Carna is planning to conduct a Phase 1b clinical study in patients in the U.S.

Kohichiro Yoshino, Ph.D., President and Chief Executive Officer at Carna Biosciences said, "Resistance to the first generation covalent BTK inhibitors including ibrutinib has become a serious issue for patients with B cell malignancies. AS-1763 is a next generation BTK inhibitor that could provide a new therapeutic option to patients who have developed resistance to the first generation BTK inhibitors. We will continue developing innovative therapies to contribute to the patients who suffer from Cancer."

Akinori Arimura, Ph.D., Head of Clinical Development at Carna Biosciences and Chief Development Officer at CarnaBio USA said, "AS-1763 strongly inhibits BTK with C481S mutation having a good safety profile comparable to our another BTK inhibitor AS-0871 under development for inflammatory and immune disorders in advance. This SAD study in healthy volunteers can evaluate safety and pharmacokinetics profile of AS-1763 in a short period, and will be able to accelerate the clinical development of AS-1763 in patients."

About AS-1763

AS-1763 is a highly selective, orally bioavailable, non-covalent inhibitor of both the wild type and C481S mutant Bruton's tyrosine kinases (BTK) for the treatment of chronic lymphocytic leukemia (CLL) and other B cell malignancies. First generation covalent BTK inhibitors including ibrutinib are key therapeutic options for patients with B cell malignancies. However, patients are reported to develop resistance during the treatment due to substitution of cysteine residue at 481 position with serine (C481S mutation) in BTK, which prevents the covalent binding of the first generation irreversible BTK inhibitors. In in vitro experiments, AS-

1763 significantly abrogates cell proliferation in both wild type and C481S mutant BTK lymphoma cells, strongly suggesting AS-1763 will be a new therapeutic option for treating patients with B cell malignancies both having wild type and C481S mutation in BTK.

Contact:
Corporate Planning
Carna Biosciences, Inc.
TEL: +81-78-302-7075
https://www.carnabio.com/english/