

A phase 1/2 study of FOG-001, a first-in-class direct β -catenin: TCF inhibitor, in patients with colorectal cancer (CRC) and other locally advanced or metastatic solid tumors.

Kyriakos P. Papadopoulos, Michael Cecchini, Moh'd M. Khushman, Meredith Pelster, Jordi Rodon Ahnert, Shivaani Kummar, Rona Yaeger, Sunil Sharma, Amber Wells, Amanda Garofalo, Lalith V Akella, Ziyang Yu, Marie Huong Nguyen, Keith W. Orford, Samuel J. Klempner; START-San Antonio, San Antonio, TX; Yale University School of Medicine, New Haven, CT; Washington University School of Medicine, St. Louis, MO; Sarah Cannon Research Institute, Houston, TX; The University of Texas MD Anderson Cancer Center, Houston, TX; Oregon Health & Science University, Portland, OR; Memorial Sloan Kettering Cancer Center, New York, NY; Honor Health, Scottsdale, AZ; Parabilis Medicines (formerly Fog Pharmaceuticals, Inc.), Cambridge, MA; Massachusetts General Hospital, Boston, MA

Background: Activation of the Wnt/ β -catenin pathway, often as truncal APC mutations, in 80–90% of CRCs and other solid tumors, is known to be a key driver of cancer progression and has been associated with immune exclusion and resistance to immunotherapy. Development of agents targeting this pathway at the key β -catenin: T-cell factor (TCF) node has eluded the pharmaceutical industry to date. FOG-001 is a Helicon peptide that competitively inhibits interaction between β -catenin and TCF transcription factors. Helicon peptides are hyper-stabilized α -helices that can be tuned for picomolar binding affinities, robust cell penetration, broad tissue distribution, no immune recognition, and long *in vivo* half-lives. In studies in a wide range of patient-derived xenograft (PDX) CRC and HCC models, FOG-001 inhibited tumor growth and promoted tumor regression as monotherapy. Combinations with immune check-point inhibitors or standard-of-care therapies, including bevacizumab and 5-FU, showed strong additivity/synergy in PDX CRC models. **Methods:** This first-in-human, phase 1/2, multicenter, open-label, dose-escalation (part 1) and dose-expansion (part 2) study evaluates the safety/tolerability, pharmacokinetics (PK), pharmacodynamics (PD), and anti-tumor effects of FOG-001 monotherapy and combined with other anti-cancer therapies in patients with microsatellite stable (MSS) CRC or advanced/metastatic solid tumors known to harbor a Wnt pathway-activating mutation (WPAM). Eligible patients must have received at least one prior systemic anti-cancer therapy and either progressed on, not responded to, or be unfit for available therapies. In Part 1, FOG-001 is administered intravenously every week, at escalating dose levels evaluated sequentially in a standard 3+3 design as monotherapy in patients with MSS CRC or any solid tumor with documented WPAM. PD effects are evaluated in a separate cohort of approximately six patients with MSS CRC. Combination cohorts will evaluate FOG-001 + FOLFOX/bevacizumab (1L MSS CRC), FOG-001 + nivolumab (3L MSS CRC or anti-PD-1/PD-L1-resistant CRC and solid tumors), and FOG-001 + trifluridine/tipiracil + bevacizumab (3L MSS CRC). Part 2 dose expansion will evaluate FOG-001 monotherapy in patients with MSS CRC and other solid WPAM+ tumors. Combination dose expansion will evaluate combinations initially studied in Part 1. Primary endpoints are safety/tolerability of FOG-001 alone or in combination. Secondary endpoints are PK, PD, recommended phase 2 dose and schedule, and preliminary anti-tumor activity (e.g., ctDNA changes, overall response rate, best objective response, duration of response, and progression-free survival). 156 patients are planned to be enrolled in Part 1, which is currently enrolling in the USA. Clinical trial information: NCT05919264. Research Sponsor: Parabilis Medicines.