Molecular Partners' COVID-19 Antiviral Candidate, Ensovibep, Maintains Potent Neutralization Against Emerging Viral Variants in vitro

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- ***in vitro* studies show ensovibep (MP0420) maintains full potency against the known mutations of SARS-CoV-2, including those present in variants first identified in Brazil, California, India, and New York, in addition to the previously reported variants originating from the UK and South Africa**
- **Ongoing Phase 2 pilot study of ensovibep in ambulatory patients now expanding into second cohort**
- **Two global Phase 2 and 3 clinical studies of ensovibep on track for initiation this month**

Zurich-Schlieren, Switzerland, May 06, 2021. Molecular Partners AG (SIX: MOLN), a clinical-stage biotech company developing a new class of custom-built protein drugs known as DARPin® therapeutics, today announced results from parallel laboratory studies conducted in collaboration with academic and government partners in Switzerland and the United States. The studies assessed the inhibition of new viral variants by leading SARS-CoV-2 anti-infective molecules, including ensovibep and MP0423. New variants are often associated with faster transmissibility and a potential ability to evade the currently available monoclonal antibodies and the immunity induced by some vaccines. On top of the previously reported inhibition of the variants first identified in the UK and South Africa, the new results reported today show that ensovibep continues to retain full potency against the new viral variants of SARS-CoV-2, including the variants first identified in Brazil, California, and New York as well as the key mutations in the Indian variant.

"By designing ensovibep to target the viral spike protein in three different places, we aimed to create a candidate capable of achieving high potency while retaining efficacy as the virus mutated. These new results show that ensovibep remains, as designed, fully potent against the emerging variants of SARS-CoV-2, which have received increasing attention as our understanding of COVID-19 shifts to regarding it as a chronic, evolving global health concern," said Patrick Amstutz, Ph.D., chief executive officer of Molecular Partners. "These data are encouraging as we and our partners at Novartis prepare to enter two major clinical trials: EMPATHY in ambulatory patients and the NIH-sponsored ACTIV-3 in hospitalized patients. We are hopeful that these data will translate into patient benefits for those who are potentially infected with these same variants."

The study design and results will be updated on the research preprint service bioRxiv here. This research builds upon prior analysis of the UK and South African strains, where ensovibep demonstrated full activity, and potential superiority compared to monoclonal antibodies currently being investigated as antiviral cocktails.

In the study update, based on two pseudovirion models, new SARS-CoV-2 variants first identified in Brazil P.1 (L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I, V1176F), California B.1.429 (S13I, P26S, W152C, L452R, D614G), New York B.1.526 (L5F, T95I, D253G, E484K, D614G, A701V) as well as emerging variants R.1 (W152L, E484K, D624G, G769V) and A.23.1 (F157L, V367F, Q613H, D614G, P681R) and the individual key mutations of the variants identified in India, B.1.617 and B.1.618, were analyzed for infectivity in the presence of different inhibitors. Ensovibep was shown to strongly neutralize these variants, as well as variants created to harbor multiple individual key point mutations in SARS-CoV-2. While maintaining inhibitory activity, MP0423, the Company's second COVID-19 candidate, has shown reduced protection against some of the variants. Specifically, mutations in the N-terminal domain were identified to be the key contributors to some reduction of potency. Further analyses in context of the full lineages B.1.617 and B.1.618, first described in India, are ongoing. Full data can be found in the updated bioRxiv publication linked above.

Molecular Partners' lead anti-COVID-19 therapeutic candidate, ensovibep, has been administered to healthy subjects in the Company's Phase 1 trial, with initial results showing it to be well-tolerated, with a half-life in the range of 2-3 weeks. Additionally, a single-arm Phase 2 trial with ensovibep in COVID-19 ambulatory patients was initiated in March 2021 at a single center in the Netherlands. The initial Phase 1 results have informed the decision to move forward with the EMPATHY clinical trial program, which is being conducted by our partner Novartis, with Molecular Partners as sponsor. The EMPATHY trial is a global, multi-center Phase 2 and 3 study that will seek to enroll 2,100 patients with COVID-19 in the ambulatory setting, to evaluate the safety and efficacy of ensovibep in preventing worsening symptoms and hospitalizations. In parallel, ensovibep will also be tested in hospitalized COVID-19 patients, in a new sub-trial of the National Institutes of Health's (NIH) Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV-3) Program Phase 3 clinical trial.

About Molecular Partners AG

Molecular Partners AG is a clinical-stage biotech company developing DARPin® therapeutics, a new class of custom-built protein drugs designed to address challenges current modalities cannot. The Company has formed partnerships with leading pharmaceutical companies to advance DARPin® therapeutics in the areas of ophthalmology, oncology and infectious disease, and has compounds in various stages of clinical and preclinical development across multiple therapeutic areas.

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