Molecular Partners Announces Publication in Nature Biotechnology Detailing Design and Mechanism of Ensovibep DARPin Antiviral for SARS-CoV-2

July 21, 2022

ZURICH-SCHLIEREN, Switzerland and CONCORD, Mass., July 21, 2022 (GLOBE NEWSWIRE) -- Molecular Partners AG (SIX: MOLN; NASDAQ: MOLN), a clinical-stage biotech company developing a new class of custom-built protein drugs known as DARPin therapeutics, today announced the publication of key preclinical data documenting the unique design and mechanism of action of ensovibep, a clinical stage antiviral DARPin designed and developed by Molecular Partners and Novartis, now fully licensed by Novartis. The study, titled "The trispecific DARPin ensovibep inhibits diverse SARS-CoV-2 variants," was published today in *Nature Biotechnology*, and can be accessed through this link.

"As a tri-specific molecule, ensovibep was designed to cooperatively bind to the SARS-CoV-2 spike protein with high affinity and to overcome potential loss of activity following mutations as the virus evolves. This study presents *in vitro* and *in vivo* results that detail the capabilities of this differentiated binding mechanism," said Patrick Amstutz, CEO of Molecular Partners. "The subsequent clinical success achieved with this first-ever DARPin antiviral is a credit to the incredible work of Molecular Partners and Novartis scientists. This publication showcases the power of our DARPin platform to deliver unique therapeutic solutions for patients in need."

The publication presents results from a series of experiments performed with ensovibep: a structural analysis of ensovibep binding to the spike protein shows that ensovibep can simultaneously engage all three units of the viral spike protein to potently inhibit ACE2 interaction; assays of the binding affinity of the individual component DARPin domains, compared to that of the full molecule, show the benefit of cooperative binding; neutralization assays with different SARS-CoV-2 variants show that ensovibep retains inhibitory potency against emerging SARS-CoV-2 variants tested, including Omicron BA.1 and BA.2; viral passaging experiments show that ensovibep, used as a single agent, can prevent development of escape mutations comparably to a cocktail of monoclonal antibodies; and, finally, ensovibep was shown to provide highly efficacious protection and reduction of pathogenesis *in vivo*, in models highly susceptible to SARS-CoV-2 infections.

These results have supported the clinical development of ensovibep, which was submitted to the U.S. Food and Drug Administration (FDA) for an Emergency Use Authorization by Novartis. Ensovibep's unique antiviral mechanism and multi-variant properties demonstrated to-date have informed Molecular Partners' decision to explore development of a broader portfolio of antiviral DARPin therapies that could provide unique solutions for future global health threats.

About ensovibep
Ensovibep is a DARPin therapeutic candidate, designed specifically to inactivate SARS-CoV-2, the virus that causes COVID-19. DARPins (Designed Ankyrin Repeat Proteins) are mono- or multi-specific protein-based therapies, designed to specifically engage their targets for various effects. Ensovibep was designed to include three individual DARPin domains, each highly neutralizing to SARS-CoV-2. With these domains constructed into a single molecule, ensovibep can block the receptor-binding domain (RBD) of the SARS-CoV-2 spike protein through highly potent and cooperative binding. This design aims to provide strong neutralization, even in the presence of mutations of the spike protein and limits the development of escape mutants. Several characteristics of DARPin therapeutics make them suitable for COVID-19 treatment, including multi-specific binding, the rapid onset of action, and scalable bacterial production.

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. www.molecularpartners.com; Find us on Twitter - @MolecularPrtnrs

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Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding the clinical development of Molecular Partners' current or future product candidates, including expectations regarding timing of clinical trials and clinical trial data, the potential therapeutic and clinical benefits of Molecular Partners' product candidates and plans with respect to potential third party collaborators. These statements may be identified by words such as "expect", "may", "plan", "potential", "will", "would" and similar expressions, and are based on Molecular Partners' current beliefs and expectations. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Some of the key factors that could cause actual results to differ from Molecular Partners' expectations include Molecular Partners' ongoing and planned clinical trials and preclinical studies for Molecular Partners' product candidates, including the timing of such trials and studies; the risk that the results of preclinical studies and clinical trials may not be predictive of future results in connection with future clinical trials; the timing of and Molecular Partners' ability to obtain and maintain regulatory approvals for Molecular Partners' product candidates; the extent of clinical trials potentially required for Molecular Partners' product candidates; Molecular Partners' plans to develop and potentially commercialize Molecular Partners' product candidates; the clinical utility and ability to achieve market acceptance of Molecular Partners' product candidates; the potential impact of the COVID-19 pandemic on Molecular Partners' operations or clinical trials; Molecular Partners' plans and development of any new indications for Molecular Partners' product candidates; Molecular Partners' commercialization, marketing and manufacturing capabilities and strategy; Molecular Partners' intellectual property position; Molecular Partners' ability to identify and in-license additional product candidates; Molecular Partners' reliance on third party partners and collaborators over which we may not always have full control; and other risks and uncertainties that are described in the Risk Factors section of Molecular Partners' Annual Report on Form 20-F for the year ended December 31, 2021, filed with the SEC on March 15, 2022, and other filings Molecular Partners makes with the SEC. These documents are available on the Investors page of Molecular Partners' website at http://www.molecularpartners.com. Any forward-looking statements speak only as of the date of this press release and are based on information available to Molecular Partners as of the date of this release, and except to the extent required by

law, Molecular Partners assumes no obligation to, and does not intend to, update any forward-looking statements, whether as a result of new information, future events or otherwise.

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