Molecular Partners Announces Research Collaboration with University of Bern to Develop MP0533, a Multispecific DARPin for the Treatment of AML

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- Research collaboration with leading acute myeloid leukemia (AML) experts, Professor Ochsenbein and Professor Riether from the Department of Medical Oncology, Inselspital, Bern University Hospital, Switzerland, to support advancement of drug development process
- MP0533 is designed to target three distinct tumor associated antigens simultaneously to achieve high specificity and broad cancer cell coverage
- The novel immuno-therapy candidate aims to engage T cells via CD3, a potent immune activator

ZURICH-SCHLIEREN, Switzerland and CONCORD, Mass., Dec. 03, 2021 (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 a research collaboration with University of Bern, to advance the development of the Company's wholly owned acute myeloid leukemia (AML) candidate, MP0533, into the clinic. MP0533 is a DARPin designed to engage CD3 on T cells and target AML cells by the tumor associated antigens (TAAs) CD33, CD123 and CD70. The collaboration aims to leverage Molecular Partners' proprietary DARPin technology and the University of Bern group's expertise in AML, and specifically in leukemic stem cells (LSC), a hard-to-target cancer progenitor cell population.

"AML is a fast-progressing cancer with a high mortality rate. Current treatments carry high safety risks and can be very harsh, especially for older and frail patients. Our preclinical results so far show MP0533 to be highly specific, fast acting and with a wide therapeutic window, and we hope these traits will translate well for patients in need," said Nicolas Leupin, M.D., Ph.D., Molecular Partner's CMO. "Our new collaboration with the Bern team provides us with access to advanced AML methodologies and patient samples, and, more importantly, guidance from two of the world's leading AML researchers, who have previously helped develop anti-CD70 antibodies to the clinic and can share from their invaluable experience."

The Bern team is led by Prof. Adrian Ochsenbein, M.D., Chairman, Department of Medical Oncology, and Prof. Carsten Riether, Ph.D., who study the interaction of immune cells and leukemic cancer cells to develop improved immunotherapies for different types of cancer. Prof. Ochsenbein won the prestigious 2016 Otto Naegeli Prize for breakthrough research on CD70/CD27 signaling with therapeutic potential for cancer patients. The two professors' main research focus is the so-called LSC. These cells are considered the origin of the disease and responsible for relapse after successful chemotherapy. Under the agreement, the researchers will work with Molecular Partners to investigate the effect and mechanism of action of the Company's DARPin candidate T-cell engager (TCE) in AML, using *in vitro* and *in vivo* models, as well as patient samples.

"The main reason AML is so hard to treat is a small population of therapy-resistant leukemia stem cells, which drives the relapse of the disease after initial successful treatment. Novel therapies will have to aim at targeting and eliminating these treatment-resistant LSCs," said Professor Ochsenbein. "We are excited to join forces with Molecular Partners to work to evaluate this novel therapeutic option. Hopefully, emerging therapeutics like MP0533 will be able to provide a much-needed solution for AML patients."

About Molecular Partners' acute myeloid leukemia (AML) program
Molecular Partners' T-cell engager (TCE) programs leverage the cell surface protein CD3 as a powerful immune activator, complemented by novel control mechanisms designed to help direct CD3-mediated cytotoxicity with heightened precision. Molecular Partners first TCE candidate is being developed as a unique multi-specific treatment for AML. Its component DARPin modules are designed to deliver a deeper attack on a broader range of highly variable tumor cells while lowering the risk to healthy cells. This may allow Molecular Partners to significantly shift the therapeutic window for TCE use in AML and potentially avoid the trade-off between effective dosage and safety that other therapeutic developers have had to make.

About Molecular Partners' Immuno-oncology Product Candidates
Molecular Partners is developing several candidates designed to activate the immune system to fight cancer while reducing damage to healthy cells. These candidates use multiple novel DARPin technologies potentially applicable against a wide range of tumor types, including DARPin candidates with the ability to restrict immune activation to the tumor microenvironment, the ability to target intracellular disease-associated proteins, and multiple novel control mechanisms for immune activation designed to direct immune attack to the right cells, at the right place, and at the right time. These capabilities can be combined during candidate design through the inherent modularity of the DARPin platform, to provide precise control over immune activation and potentially enable more effective cancer immunotherapies.

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

Cautionary Note Regarding Forward-Looking Statements
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 or the potential therapeutic and clinical benefits of Molecular Partners' product candidates, including ensovibep's potency against the individual positions that are mutated in the Omicron variant and the efficacy of ensovibep against a virus that recapitulates all the mutations simultaneously. These statements may

be identified by words such as “expect”, “may”, “plan”, “potential”, “will” and similar expressions, and are based on Molecular Partners AG’s 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 our expectations include our ongoing and planned clinical trials and preclinical studies for our 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; our reliance on third party partners and collaborators over which we may not always have full control; our plans to develop and potentially commercialize our product candidates; the timing of and our ability to obtain and maintain regulatory approvals for our product candidates; the extent of clinical trials potentially required for our product candidates; the clinical utility and ability to achieve market acceptance of our product candidates; the potential impact of the COVID-19 pandemic on our operations or clinical trials; the risk that testing may not confirm the efficacy of ensovibep against a virus that recapitulates all the mutations simultaneously (a full Omicron pseudo-variant); our plans and development of any new indications for our product candidates; our commercialization, marketing and manufacturing capabilities and strategy; our intellectual property position; our ability to identify and in-license additional product candidates; and other risks and uncertainties that are described in the Risk Factors section of Molecular Partners’ Registration Statement on Form F-1 filed with Securities and Exchange Commission (SEC) on June 14, 2021 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 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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