Molecular Partners Announces Upcoming Poster Presentations at the 65th ASH Annual Meeting and Exposition

November 5, 2024

Clinical update from ongoing MP0533 phase 1/2a dose escalation study confirms overall acceptable safety profile observed so far and initial antileukemic and pharmacodynamic activity

Switch-DARPin MP0621 demonstrates cKit+ cell killing while reducing off-target effects seen with systemic anti-CD47 blockade

ZURICH-SCHLIEREN, Switzerland and CONCORD, Mass., Nov. 05, 2024 (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 presentation of data from its MP0533 and MP0621 programs at the upcoming Annual Meeting of the American Society of Hematology (ASH) in San Diego, running December 7–10, 2024.

The poster presentation details are as follows:

Session Name: 616. Acute Myeloid Leukemias: Investigational Drug and Cellular Therapies: Poster II
Publication Number: 2881
Title: MP0533 (CD33 x CD123 x CD70 x CD3), a Tetra-Specific CD3-Engaging Darpin for the Treatment of Patients with Relapsed/Refractory AML or MDS/AML: Results of an Ongoing Phase 1/2a Study
Session Location: San Diego Convention Center, Halls G-H
Presentation Date & Time: Sunday, December 8, 2024, 6:00–8:00 pm PT

Session Name: 701. Experimental Transplantation: Basic and Translational: Poster III
Publication Number: 4775
Title: MP0621 (cKit x CD16a x CD47), a Multi-Specific Switch-Darpin with Conditional Blockade of CD47 Targeting Hematopoietic Stem Cells: Preclinical Evaluation of a Next-Generation Conditioning Agent for Stem Cell Transplantation
Session Location: San Diego Convention Center, Halls G-H
Presentation Date & Time: Monday, December 9, 2024, 6:00–8:00 pm PT

The full abstracts will be available on the ASH website from 9:00 am ET on November 5, 2024.

About MP0533 (CD33 x CD123 x CD70 x CD3)

MP0533 is a novel tetraspecific T cell engaging DARPin which simultaneously targets the three tumor-associated antigens (TAAs) CD33, CD123 and CD70, as well as CD3 on T cells. The mechanism of action of MP0533 is designed to preferentially kill AML cells that express any combination of these three TAAs while sparing healthy cells, which express only one or none of these targets. The immune activation against the malignant cells is achieved through CD3-mediated T cell-engagement.

The poster to be presented at ASH 2024 will provide a clinical update of the ongoing first-in-human dose-escalation phase 1/2a study of MP0533 in patients with relapsed/refractory acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS)/AML. MP0533 showed an acceptable safety profile in the first 7 dose cohorts, with the majority of adverse events reported being infusion-related reactions and cytokine release syndrome.

Based on this observed tolerability profile and initial antitumor and pharmacodynamic activity data, Molecular Partners is amending the protocol to further optimize the dosing schedule and improve the exposure profile of MP0533.

About MP0621 (cKit x CD16a x CD47)

MP0621 is a Switch-DARPin candidate designed to induce killing of hematopoietic stem cells (HSCs) as a next-generation conditioning regimen for HSC transplantation (HSCT). The Switch-DARPin platform provides a logic-gated “on/off” function (the “Switch”) to multispecific DARPin candidates leading to target activation only in the presence of defined antigens. In MP0621, the Switch-DARPin binds to either cellular cKit or to the anti-CD47 DARPin binder. Upon MP0621 binding to cKit on HSCs, the Switch-DARPin will unmask the anti-CD47 DARPin, which in turn will bind CD47 and block the “don’t-eat-me” signal, leveraging the power of CD47 inhibition without its associated toxicity to healthy cells.

The poster to be presented at ASH 2024 builds on the data presented earlier this year at the European Haematology Association 2024 Congress and provides further preclinical *in vivo* proof-of-mechanism data, demonstrating that MP0621 could be an efficient next-generation conditioning regimen for autologous HSCT.

At present non-human primate data do not indicate that MP0621 would serve as a treatment for AML, as was previously hypothesized, in addition to HSCT. As Molecular Partners’ portfolio strategy prioritizes therapeutic candidates for oncology, MP0621 is being evaluated for partnering.

About DARPin Therapeutics
DARPin (Designed Ankyrin Repeat Protein) therapeutics are a new class of custom-built protein drugs based on natural binding proteins that open new dimensions of multi-functionality and multi-target specificity in drug design. The flexible architecture, intrinsic potential for high affinity and specificity, small size and high stability of DARPins offer benefits to drug design over other currently available protein-based therapeutics. DARPin candidates can be radically simple, with a single DARPin unit acting as the delivery vector to a specific target; or multispecific, with the possibility of engaging more than five targets, and combining multiple and conditional functionalities in a unique DARPin drug candidate. The DARPin platform is

designed to be a rapid and cost-effective drug discovery engine, producing drug candidates with optimized properties and high production yields. DARPin therapeutics have been clinically validated across several therapeutic areas and developed through to the registrational stage.

About Molecular Partners AG
Molecular Partners AG is a clinical-stage biotech company pioneering the design and development of DARPin therapeutics for medical challenges other drug modalities cannot readily address. The Company has programs in various stages of pre-clinical and clinical development, with oncology as its main focus. Molecular Partners leverages the advantages of DARPins to provide unique solutions to patients through its proprietary programs as well as through partnerships with leading pharmaceutical companies. Molecular Partners was founded in 2004 and has offices in both Zurich, Switzerland and Concord, MA, USA. For more information, visit www.molecularpartners.com and find us on LinkedIn and Twitter/X @MolecularPrtnrs

For further details, please contact:
Seth Lewis, SVP Investor Relations & Strategy
Concord, Massachusetts, U.S.
seth.lewis@molecularpartners.com
Tel: +1 781 420 2361

Laura Jeanbart, PhD, Head of Portfolio Management & Communications
Zurich-Schlieren, Switzerland
laura.jeanbart@molecularpartners.com
Tel: +41 44 575 19 35

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; expectations regarding timing for reporting data from ongoing clinical trials or the initiation of future clinical trials; the potential therapeutic and clinical benefits of Molecular Partners' product candidates and its RDT and Switch-DARPin platforms; the selection and development of future programs; Molecular Partners' collaboration with Orano Med including the benefits and results that may be achieved through the collaboration; and Molecular Partners' expected business and financial outlook, including anticipated expenses and cash utilization for 2024 and its expectation of its current cash runway. These statements may be identified by words such as "aim", "expect", "guidance", "intend", "outlook", "plan", "potential", "will" 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 its plans to develop and potentially commercialize its product candidates; Molecular Partners' reliance on third party partners and collaborators over which it may not always have full control; Molecular Partners' ongoing and planned clinical trials and preclinical studies for its 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 its product candidates; the extent of clinical trials potentially required for Molecular Partners' product candidates; the clinical utility and ability to achieve market acceptance of Molecular Partners' product candidates; the potential that Molecular Partners' product candidates may exhibit serious adverse, undesirable or unacceptable side effects; the impact of any health pandemic, macroeconomic factors and other global events on Molecular Partners' preclinical studies, clinical trials or operations, or the operations of third parties on which it relies; Molecular Partners' plans and development of any new indications for its 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; unanticipated factors in addition to the foregoing that may impact Molecular Partners' financial and business projections and guidance; and other risks and uncertainties that are described in the Risk Factors section of Molecular Partners' Annual Report on Form 20-F for the fiscal year ended December 31, 2023, filed with Securities and Exchange Commission (SEC) on March 14, 2024 and other filings Molecular Partners makes with the SEC. These documents are available on the Investors page of Molecular Partners' website at www.molecularpartners.com. In addition, this press release contains information relating to interim data as of the relevant data cutoff date, results of which may differ from topline results that may be obtained in the future. 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.