Molecular Partners presents additional preclinical proof-of-concept data on logic-gated CD3 Switch-DARPin at SITC 2025

November 3, 2025

- *Poster presentation outlines potential of CD3 Switch-DARPin T cell engager (TCE) using an AND-gate to overcome limitations of other TCEs*
- *Demonstrated selective T cell cytotoxicity against cells co-expressing tumor-associated antigens MSLN and EpCAM*
- *Induced significant tumor regression in vivo without causing systemic cytokine release, indicating favorable safety profile*

ZURICH-SCHLIEREN, Switzerland and CONCORD, Mass., Nov. 03, 2025 (GLOBE NEWSWIRE) -- **Ad hoc announcement pursuant to Art. 53 LR** 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 ("Molecular Partners" or the "Company"), today announced it will present further preclinical proof-of-concept data on its logic-gated CD3 Switch-DARPin T cell engager (TCE) with CD2 co-stimulation in a poster at the Society for Immunotherapy of Cancer (SITC) 2025 meeting, taking place in National Harbor, MD, USA from November 5-9.

Clinical development of TCEs for solid tumors is often limited by systemic toxicity in the absence of specific enough tumor antigens and by impaired efficacy due to insufficient T cell activity. To address this, Molecular Partners designed a logic-gated Switch-DARPin TCE using an AND-gate to achieve conditional tumor-localized immune activation targeting mesothelin (MSLN) and epithelial cell adhesion molecule (EpCAM), which are highly co-expressed in ovarian cancer and other solid tumors. The Switch-DARPin TCE is designed for the CD3-engaging DARPin to be unmasked ("Switch" on) and activate T cells only upon binding to both MSLN and EpCAM (AND-gate).

Preclinical data to be presented at SITC show that the Switch-DARPin demonstrated selective T cell cytotoxicity against cells co-expressing both tumor-associated antigens, with attenuated activity against cells in healthy tissues expressing only MSLN or only EpCAM. In addition, T cells repetitively exposed to CD2/CD3 Switch-DARPin showed a fundamentally improved activation and proliferation profile as compared to CD3 engagement alone, highlighting the potential of CD2/CD3 Switch-DARPin to overcome T cell exhaustion. Finally, the Switch-DARPin induced significant tumor regression in a xenograft mouse model expressing MSLN and EpCAM without causing systemic cytokine release, indicating a favorable safety profile.

"These data further underline the potential of Molecular Partners' wholly-owned logic-gated and co-stimulated T cell engager program, which allows for targeted, conditional immune activation only in the presence of defined targets. The Switch-DARPin only activates T cells when both tumor-associated antigens are bound, and remains inactive in circulation, which allows the addition of a CD2 DARPin for co-stimulation of T cells. This approach is an opportunity for novel cancer treatments through logic-gated tumor-directed immune activation with increased efficacy and safety over modalities targeting a single tumor antigen," said **Martin Steegmaier, Ph.D., CSO of Molecular Partners**.

Details of the presentation

Title: A next-generation conditional Switch-DARPin T cell engager with CD2 co-stimulation enabling selective activity against solid tumors which co-express mesothelin (MSLN) and EpCAM

Abstract number: 829

Time: November 7, 2025

Location: Gaylord National Resort and Convention Center - Lower Level Atrium - Prince George's ABC

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 (SIX: MOLN, NASDAQ: MOLN) 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

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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 2025 and its expectation of its current cash runway. These statements may be identified by words such as "aim", "anticipate", "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 cause Molecular Partners' actual results to differ from its financial and business projections and guidance; and other risks and uncertainties set forth in Molecular Partners' Annual Report on Form 20-F for the year ended December 31, 2024 and other filings Molecular Partners makes with the SEC from time to time. 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.