Sana Biotechnology Presentations at 2021 ASH Annual Meeting Highlight Progress with Platforms and CAR T Cell Programs

December 12, 2021

Hypoimmune CAR T cells evade both innate and adaptive immune systems in murine models, even in animals with pre-existing immunity to CAR T cells

CD8- and CD4-targeted fusosomes generated functional CAR T cells in vivo*, demonstrating T cell-specific delivery and therapeutic function in animal models*

SEATTLE, Dec. 12, 2021 (GLOBE NEWSWIRE) -- Sana Biotechnology, Inc. (NASDAQ: SANA), a company focused on creating and delivering engineered cells as medicines, presented data at the 63rd American Society of Hematology (ASH) Annual Meeting and Exposition, taking place from Saturday, December 11 to Tuesday, December 14, 2021, which highlighted further progress with key technologies supporting Sana's *in vivo* and *ex vivo* CAR T cell programs.

"The data presented at ASH showcase the progress we are making with Sana's CAR T cell programs," said Terry Fry, M.D., Sana's Head of T Cell Therapeutics. "The hypoimmune and fusogen technologies are designed to address significant challenges that lead to sub-optimal patient outcomes and prevent widespread utilization of cell and gene therapies, including cell persistence and cell-specific delivery. We continue to move these potential therapies toward clinical trials in patients, with a goal of filing two INDs as early as next year."

On Saturday, December 11, Sonja Schrepfer, M.D., Ph.D., Sana's Head of Hypoimmune Platform, presented a poster (Abstract 1690) titled "Engineered hypoimmune allogeneic CAR T cells exhibit innate and adaptive immune evasion even after sensitization in humanized mice and retain potent anti-tumor activity." Data demonstrated continued progress with Sana's hypoimmune allogeneic CAR T cell platform, showing in murine models that these gene-modified CAR T cells targeting CD19 can evade both the innate and adaptive immune systems without any evidence of a change in their ability to eliminate leukemia. This immune evasion was present in naïve subjects as well as in sensitized subjects that had previously rejected non-hypoimmune CAR T cells. In the study, the hypoimmune allogeneic CD19 CAR T cells did not induce activation of the adaptive immune system, T cells or B cells, in the treated subjects ($p<0.0001$ when compared to non-modified CD19 CAR T cells), and also evaded the subjects' innate immune responses. These findings are an important step toward the possibility of "off-the-shelf" allogeneic CD19 CAR T cells that persist without immunosuppression, including in patients that have previously been treated with a CAR T therapy.

On Sunday, December 12, Terry Fry, M.D., presented a poster (Abstract 2769) titled "*In vivo* delivery of a CD20 CAR using a CD8-targeted fusosome in Southern pig-tail macaques (*M. nemestrina*) results in B cell depletion." The presentation outlined the potential to deliver a CAR gene to make CAR T cells *in vivo.* B cell depletion in these healthy non-human primates is used as a surrogate marker for an anti-tumor effect against B cell malignancies such as leukemia and lymphoma. Following the infusion of the CD8a-targeted fusosome carrying the gene for an anti-CD20 CAR into macaques, B cells were meaningfully reduced in 4 of 6 animals after 7 to 10 days. Scientists found the anti-CD20 CAR transcripts via measurements of mRNA expression in spleen cells isolated from treated animals; conversely, no expression was detected in tissues from control animals. Subjects in this study received no lymphodepleting chemotherapy. Additionally, the fusosome treatment was well-tolerated in all animals with no evidence of adverse effects. These findings suggest that the fusosome technology represents a novel therapeutic opportunity to treat patients with B cell malignancies, with the potential for *in vivo* delivery of the CAR gene to CD8 T cells.

On Sunday, December 12, Sana Scientist Christie Ciarlo, Ph.D., presented a poster (Abstract 2942) titled "CD4-targeted fusosomes are capable of transducing resting T helper cells to generate highly potent CAR T cells." The presentation highlighted the ability of select fusosomes to effectively target the correct cells and to deliver an integrating CAR payload that can develop CAR T cells *in vivo*. CD4-targeted CD19 CAR fusosomes efficiently transduced activated T cells (34% ± 1.5% CD4+CAR+; 0.54 ± 0.18 c/dg) and resting T cells (20% ± 0.5% CD4+CAR+; 0.28 ± 0.14 c/dg). The data showed that these fusosomes were specific to certain T cells based on their functionality and also that they could deliver their payloads to helper T cells without activation, opening up new potential pathways for *in vivo* cell therapies. Investigators concluded that targeting the CD4 co-receptor through *in vivo* delivery of a genetic payload can produce potent and functional CAR T cells, with the potential to target certain cancers.

About Sana Biotechnology
Sana Biotechnology, Inc. is focused on creating and delivering engineered cells as medicines for patients. We share a vision of repairing and controlling genes, replacing missing or damaged cells, and making our therapies broadly available to patients. We are more than 350 people working together to create an enduring company that changes how the world treats disease. Sana has operations in Seattle, Cambridge, and South San Francisco. For more information about Sana Biotechnology, please visit https://sana.com/.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements about Sana Biotechnology, Inc. (the "Company," "we," "us," or "our") within the meaning of the federal securities laws, including those related to the Company's vision, progress, and business plans; expectations for its development programs, product candidates and technology platforms, including its pre-clinical, clinical and regulatory development plans and timing expectations, including with respect to the filing of IND applications; and the potential activity, uses and advantages of hypoimmune CAR T cells and fusosome technology, including CD4-specific fusosomes and CD8α-targeted fusosomes. All statements other than statements of historical facts contained in this press release, including, among others, statements regarding the Company's strategy, expectations, cash runway and future financial condition, future operations, and prospects, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "design," "due," "estimate," "expect," "goal," "intend," "may," "objective," "plan," "positioned," "potential," "predict," "seek," "should," "target," "will," "would" and other similar expressions that are predictions of or indicate future events

and future trends, or the negative of these terms or other comparable terminology. The Company has based these forward-looking statements largely on its current expectations, estimates, forecasts and projections about future events and financial trends that it believes may affect its financial condition, results of operations, business strategy and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. These statements are subject to risks and uncertainties that could cause the actual results to vary materially, including, among others, the risks inherent in drug development such as those associated with the initiation, cost, timing, progress and results of the Company's current and future research and development programs, preclinical and clinical trials, as well as the economic, market and social disruptions due to the ongoing COVID-19 public health crisis. For a detailed discussion of the risk factors that could affect the Company's actual results, please refer to the risk factors identified in the Company's SEC reports, including but not limited to its Annual Report on Form 10-K dated March 24, 2021 and Quarterly Report on Form 10-Q dated November 8, 2021. Except as required by law, the Company undertakes no obligation to update publicly any forward-looking statements for any reason.

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