Sensei Biotherapeutics Presents Preclinical Data at the 37th Society for Immunotherapy of Cancer (SITC) Annual Meeting

November 10, 2022

- SNS-101, a highly pH-selective antibody to VISTA, demonstrated anti-tumor effects and promising pharmacokinetic properties in preclinical studies -

- Characterization of endogenous expression patterns, and identification of novel T-cell receptors, of VSIG4 enables advancement of SNS-102 program -

BOSTON, Nov. 10, 2022 (GLOBE NEWSWIRE) -- Sensei Biotherapeutics, Inc. (Nasdaq: SNSE), an immuno-oncology company focused on the discovery and development of next-generation therapeutics for cancer patients, today presented preclinical data for SNS-101, a conditionally active VISTA-blocking antibody, as well as characterization of VSIG4, an immune checkpoint targeted by Sensei's discovery-stage SNS-102 program, at the Society for Immunotherapy of Cancer (SITC) 37th Annual Meeting.

"The data presented at SITC add to the growing body of evidence that our TMAb™ platform is a potentially powerful approach for unlocking previously undruggable immune targets. With the advancement of SNS-101, we have a highly pH-selective antibody to VISTA, which is designed to be conditionally active within the tumor microenvironment," said Robert Pierce, M.D., Chief R&D Officer at Sensei. "We have also made exciting progress in our SNS-102 program, with the functional characterization and identification of novel T-cell receptors that may play a role in VSIG4-mediated immunosuppression. We look forward to advancing both programs with an upcoming IND filing for SNS-101 and identification of a lead anti-VSIG4 antibody in 2023."

Presentation Highlights:

Poster presentation titled, "SNS-101, a highly pH-selective VISTA:PSGL-1 inhibitory antibody, potentiates anti-PD-1 sensitivity, expands memory T-cells and enhances tumor infiltration of CD8 T-cells"

Summary: Sensei has developed SNS-101, a conditionally active, human monoclonal IgG1 antibody specific for the protonated, active form of VISTA, which in preclinical studies has demonstrated the ability to disrupt the immunosuppressive VISTA:PSGL-1 interaction, avoid target-mediated drug disposition (TMDD) and mitigate potential cytokine release syndrome (CRS).

- SNS-101 did not bind to human or non-human primates (NHP) VISTA^{+} monocytes, neutrophils and natural killer cells in blood or other normal tissue compartments.
- SNS-101 induced significant expansion of naïve CD8 T-cells and memory CD4 and CD8 T-cells *in vivo* without activation or depletion of monocytes.
- SNS-101 exhibited linear elimination kinetics in non-human primates, overcoming TMDD-induced pharmacokinetic limitations observed with other anti-VISTA antibodies.
- In an MC-38 syngeneic tumor model, SNS-101 demonstrated significant enhancement of anti-tumor effects in combination with anti-PD-1 antibodies and a dose-dependent increase in CD8^{+} T-cells.
- IND filing for SNS-101 is anticipated in the first half of 2023.

Poster presentation titled, "Functional characterization of the inhibitory activity and identification of novel T-cell receptors for the tumor-associated macrophage receptor VSIG4"

Summary: Sensei characterized endogenous expression patterns of VSIG4 in polarized macrophage populations and showed a robust VSIG4-mediated suppression of primary human T-cells. Additionally, a ligand receptor capture-trifunctional chemoproteomic (LRC-TriCEPS)-based proteomics strategy identified receptors on primary human T-cells that interact with recombinant VSIG4 protein.

- Primary monocytes were purified from peripheral blood mononuclear cells and differentiated into macrophages. Multiplexed droplet digital PCR analysis revealed a robust induction of gene expression of VSIG4 following multiple immunosuppressive stimulations.
- Development of multiple functional assays demonstrated VSIG4-mediated suppression of primary human CD4 T-cells.
- Through the LRC-TriCEPS proteomics screen, a set of potentially novel T cell receptor candidates that interact with VSIG4 were identified.

- A Cas9/CRISPR-based target gene knockdown methodology will be implemented for validation of VSIG4-interacting T-cell receptor candidates.
- An initial set of pH-selective anti-VSIG4 antibodies have been identified and further optimization is ongoing to identify a lead antibody.

A copy of the presentation materials will be added to the "Events & Presentations" section of the Company's Investor Relations website at www.senseibio.com.

About Sensei Biotherapeutics
Sensei Biotherapeutics (NASDAQ: SNSE) is an immuno-oncology company focused on the discovery and development of next-generation therapeutics for cancer patients. Through its TMAb™ (Tumor Microenvironment Activated biologics) platform, Sensei develops conditionally active therapeutics designed to disable checkpoints and other immunosuppressive signals selectively in the tumor microenvironment to unleash T cells against tumors. Sensei's lead investigational candidate is SNS-101, a conditionally active antibody designed to block the V-domain Ig suppressor of T cell activation (VISTA) checkpoint selectively within the low pH tumor microenvironment, where VISTA acts as a suppressor of T cells by binding the receptor PSGL-1. The company is also developing SNS-102, a conditional binding monoclonal antibody targeting V-Set and Immunoglobulin Domain Containing 4 (VSIG-4), as well as SNS-103, also a conditionally active monoclonal antibody targeting ecto-nucleoside triphosphate diphosphohydrolase-1 (ENTPDase1), also known as CD39. For more information, please visit www.senseibio.com, and follow the company on Twitter @SenseiBio and LinkedIn.

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. These statements may be identified by words and phrases such as "believe", "designed to," "expect", "may", "plan", "potential", "will", and similar expressions, and are based on Sensei's current beliefs and expectations. These forward-looking statements include expectations regarding the development of Sensei's product candidates and platforms; the potential safety profile of Sensei's product candidates; the potential benefits of Sensei's product candidates; the timing of selection of lead product candidates; and the timing of an IND submission to the FDA. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Risks and uncertainties that may cause actual results to differ materially include uncertainties inherent in the development of therapeutic product candidates, such as the risk that any one or more of Sensei's product candidates will not be successfully developed or commercialized; the risk of delay or cessation of any planned clinical trials of Sensei's product candidates; the risk that prior results, such as signals of safety, activity or durability of effect, observed from preclinical studies, including the preclinical studies described in this press release, will not be replicated or will not continue in ongoing or future studies or clinical trials involving Sensei's product candidates; the risk that Sensei's product candidates or procedures in connection with the administration thereof will not have the safety or efficacy profile that we anticipate; risks associated with Sensei's dependence on third-party suppliers and manufacturers, including sole source suppliers, over which we may not always have full control; risks regarding the accuracy of our estimates of expenses, capital requirements and needs for additional financing; and other risks and uncertainties that are described in Sensei's Annual Report on Form 10-Q filed with the U.S. Securities and Exchange Commission (SEC) on November 8, 2022 and Sensei's other Periodic Reports filed with the SEC. Any forward-looking statements speak only as of the date of this press release and are based on information available to Sensei as of the date of this release, and Sensei 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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