Senti Bio to Present Preclinical Data on Cancer-Killing Allogeneic CAR-NK Cells at AACR Annual Meeting

March 8, 2022

- Abstract highlights the Company's progress in applying gene circuits to improve the cytotoxicity and persistence of allogeneic CAR-NK cells for the potential treatment of solid tumors -

South San Francisco, Calif., March 8, 2022—Senti Bio, a leading gene circuit company, today announced the acceptance of an abstract for presentation at the American Association for Cancer Research (AACR) annual meeting in New Orleans taking place April 8–13, 2022.

The abstract, titled "Driving anti-tumor activity in solid tumors with controlled arming of allogeneic CAR-NK cells," details the Company's efforts to develop gene circuits to arm chimeric antigen receptor natural killer (CAR-NK) cells with multiple cytokines to improve the cytotoxicity and persistence of its CAR-NK cell product candidates. Specifically, the authors outline the benefits of calibrated release gene circuit technology, which combines the advantages of secreted and membrane-tethered cytokine-mediated stimulation of the patient's immune system, to better control solid tumors. This technology is being applied in the design of multiple Senti Bio pipeline products including SENTI-301 and SENTI-401, which are aimed to treat solid tumors such as hepatocellular carcinoma (HCC) and colorectal cancer (CRC) respectively.

A major obstacle in treating solid tumors with cell therapies is overcoming the immunosuppressive tumor microenvironment (TME). Senti Bio has designed and optimized gene circuits to arm CAR-NK cells with cytokines, which improve the cells' cytotoxicity and persistence, potentially enhancing the probability of durable therapeutic efficacy. While secreted cytokines are well known to stimulate the immune system to fight solid tumors, they are often associated with systemic toxicity. Membrane-bound cytokines, by contrast, can cause a more localized and potent stimulation of the CAR-NK cells but have limited impact on the broader tumor microenvironment.

Senti Bio's calibrated release gene circuit technology results in optimized distribution to take advantage of the best features of both secreted and membrane-tethered cytokines. The authors also show that combining the cytokines interleukin 15 and 21 (IL-15 and IL-21) significantly prolongs the survival and anti-tumor activity of CAR-NK cells. Overall, the results suggest the advantage of multi-arming CAR-NK cells with cytokines, using Senti Bio's novel calibrated release technology and cytokine combinations, resulting in improved CAR-NK cell function in solid tumor models.

The abstract is available now on the AACR website, and the full poster presentation will be available on the Senti Bio and AACR websites starting April 8.

About Senti Bio
Our mission is to create a new generation of smarter medicines that outmaneuver complex diseases in ways previously inconceivable. To accomplish this mission, we have built a synthetic biology platform that enables us to program next-generation cell and gene therapies with what we refer to as "gene circuits." These gene circuits, which are created from novel and proprietary combinations of DNA sequences, reprogram cells with biological logic to sense inputs, compute decisions, and respond to their cellular environments. We are designing gene circuits to improve the "intelligence" of cell and gene therapies in order to enhance their therapeutic activity against a broad range of diseases that conventional medicines do not readily address. For more information, please visit the Senti Bio website at https://www.sentibio.com.

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