Editas Medicine Reports Engineered iNK Cell Preclinical Data at American Association for Cancer Research Annual Meeting

April 8, 2022

Preclinical data demonstrate that edited iNK cells result in increased persistence, enhanced anti-tumor activity and extended survival supporting continued development as a novel therapeutic approach for solid tumors

In vivo preclinical data show that edited iNK cells in combination with trastuzumab resulted in complete tumor clearance in 6 of 8 treated mice, as well as prolonged persistence with 100% of treated mice surviving through the end of the experiment (day 144)

CAMBRIDGE, Mass., April 08, 2022 (GLOBE NEWSWIRE) -- Editas Medicine, Inc. (Nasdaq: EDIT), a leading genome editing company, today announced *in vitro* and *in vivo* preclinical data on the enhanced tumor killing capacity of modified induced pluripotent stem cell (iPSC)-derived natural killer (or iNK) cell therapies using Editas Medicine's proprietary gene editing platform. The approach employed in this research is being developed to create allogeneic, investigational NK cell therapy medicines with potentially enhanced and prolonged activity against solid tumors. The Company reported these data in a poster available today at the American Association for Cancer Research (AACR) conference in New Orleans. Editas scientists will also present the poster in a session on Sunday, April 10.

The poster reports that the Company generated gene edited iPSC clones, which were then differentiated into iNK cells and assessed for *in vitro* and *in vivo* anti-tumor activity. iPSCs were edited at an essential gene exon using both the Company's proprietary SLEEK (SeLection by Essential-gene Exon Knock-in) technology and engineered AsCas12a nuclease to knock-in both CD16 and membrane-bound IL-15 (mbIL-15). Edited iNK cells ($CD16^{+/+}$ /$mbIL\text{-}15^{+/+}$) were designed to increase antibody-dependent cellular cytotoxicity (ADCC), when combined with tumor-targeting antibodies, and prolong iNK cell persistence *in vivo*.

"By using our proprietary engineered AsCas12a nuclease and SLEEK technology, we have developed novel allogenic iNK cell lines with significantly enhanced *in vitro* and *in vivo* anti-tumor activity, prolonged cell persistence, and resulting increased survival in a murine cancer model," said Mark S. Shearman, Ph.D., Executive Vice President and Chief Scientific Officer, Editas Medicine. "These data reinforce our belief that edited iNK cells are attractive candidates for off-the-shelf immunotherapy medicines given their high tumor killing capacity, strong persistence, and low propensity for graft-versus-host disease, and we continue to advance these programs toward the clinic."

Key findings include:

- Edited iNK cells in combination with trastuzumab showed significantly enhanced tumor killing compared with wild type (WT) iNKs in an *in vitro* 3D SKOV-3 ovarian tumor spheroid assay.
- Evaluation in an *in vivo* mouse solid tumor SKOV-3 cancer model demonstrated that edited iNK cells combined with trastuzumab induced significant reduction in tumor burden compared with WT iNK cells plus trastuzumab and trastuzumab only, resulting in complete tumor clearance in 6 of 8 treated mice over the course of the 144-day experiment.
- Additionally, when combined with trastuzumab, edited iNKs significantly increased survival over WT iNK cells in the solid tumor SKOV-3 mouse model. At day 144, 100% of edited iNK-treated mice were alive, compared with less than half of the WT iNK-treated mice.
- Edited iNKs were detected in the peritoneum of the treated mice through the end of the experiment at day 144, demonstrating that the knocked-in mbIL-15 maintained iNK survival for a prolonged period in the absence of exogenous cytokine support.

Presentation Session Information:
Title: AsCas12a gene-edited iPSC-derived NK cells constitutively expressing CD16 and membrane-bound IL-15 demonstrate prolonged persistence and robust anti-tumor activities in a solid tumor mouse model
Date and Time: Sunday, April 10, 1:30 p.m. – 5:00 p.m. CDT
Session Category: Immunology
Session Title: Adoptive Cell Therapy 1
Location: New Orleans Convention Center, Exhibit Halls D-H, Poster Section 36

Full details of the Editas Medicine presentations can be accessed in the **Posters & Presentations** section on the Company's website.

About SLEEK Gene Editing
SLEEK (SeLection by Essential-gene Exon Knock-in) gene editing is an optimized approach to developing the next generation of cell therapy medicines for cancer and other serious diseases. Utilizing Editas Medicine's proprietary engineered AsCas12a nuclease, SLEEK enables high efficiency, multi-transgene knock-in of induced pluripotent stem cells (iPSCs), T cells, and natural killer (NK) cells while ensuring robust, transgene expression. Editas Medicine is currently leveraging SLEEK technology in its oncology programs.

About Editas Medicine
As a leading genome editing company, Editas Medicine is focused on translating the power and potential of the CRISPR/Cas9 and CRISPR/Cas12a (also known as Cpf1) genome editing systems into a robust pipeline of treatments for people living with serious diseases around the world. Editas Medicine aims to discover, develop, manufacture, and commercialize transformative, durable, precision genomic medicines for a broad class of

diseases. For the latest information and scientific presentations, please visit www.editasmedicine.com.

Forward-Looking Statements

This press release contains forward-looking statements and information within the meaning of The Private Securities Litigation Reform Act of 1995. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "target," "should," "would," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The Company may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various factors, including: uncertainties inherent in the initiation and completion of preclinical studies and clinical trials and clinical development of the Company's product candidates; availability and timing of results from preclinical studies and clinical trials; whether interim results from a clinical trial will be predictive of the final results of the trial or the results of future trials; expectations for regulatory approvals to conduct trials or to market products and availability of funding sufficient for the Company's foreseeable and unforeseeable operating expenses and capital expenditure requirements. These and other risks are described in greater detail under the caption "Risk Factors" included in the Company's most recent Annual Report on Form 10-K, which is on file with the Securities and Exchange Commission, and in other filings that the Company may make with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statements, whether because of new information, future events or otherwise.

Contacts:
Media
Cristi Barnett
(617) 401-0113
cristi.barnett@editasmed.com

Investors
Ron Moldaver
(617) 401-9052
ir@editasmed.com

Source: Editas Medicine, Inc.