PRESS RELEASE

Cellectis Presents Pre-Clinical Evidence of MUC1 CAR T-cells Reducing Triple-Negative Breast Cancer While Preserving Safety

September 3rd, 2024 – New York (NY) – Cellectis (the "Company") (Euronext Growth: ALCLS - NASDAQ: CLLS), a clinical-stage biotechnology company using its pioneering gene-editing platform to develop life-saving cell and gene therapies, today published a scientific article in Science Advances suggesting that TALEN®-edited MUC1 CAR T-cells could be a potential treatment option for advance-stage triple negative breast cancer (TNBC) patients with limited therapeutic options.

Globally, breast cancer continues to be the most prevalent malignancy in women. Among all subtypes, triple-negative breast cancer (TNBC) stands out as the most aggressive form with high metastatic potential and poor survival rates.

Despite a few emerging targeted therapies under investigation, surgery, chemotherapy and radiation therapy continue to be the standard of care, and their success remains limited. As an alternative, Chimeric Antigen Receptor (CAR) T-cell therapies could hold promise for advance-stage TNBC patients as tumor-associated MUC1 antigen is overexpressed in a large number of patients thus offering a distinct target for treatment.

In this article, Cellectis described its multi-layered CAR T-cell engineering strategy using TALEN® and synthetic biology to multi-armor CAR T-cells with synergistic functionalities to overcome the immunosuppressive tumor microenvironment (TME) of solid tumors. With this strategy, Cellectis demonstrates enhanced cytotoxic activity of MUC1 CAR T-cells armored with PD1KO, tumor-specific IL12 release and TGFBR2KO attributes, all of them catered towards the TNBC TME, in intravenous and intratumoral mouse models.

"Complexity of solid tumors decreases the efficacy of CAR T-cell therapies. With this pre-clinical study, we showed that TALEN®-mediated multiplex editing can support CAR T-cells in effectively mounting an anti-tumor response to clear breast tumors, and that we can further decrease the dose of the treatment by injecting the CAR T cells intratumorally while still treating distant tumors. This innovative approach also allowed us to discover an unexpected cooperation between the edits in increasing safety, highlighting the potential capabilities of multiplex editing" said Piril Erler, PhD, Scientist II at Cellectis.

Importantly, intratumoral treatment effectively reduced local and distant tumors of large size using low doses of multi-armored MUC1 CAR T-cells. This pre-clinical data suggests that the benefits of antigen recognition are maintained at distant sites and highlights the potential to address metastasis with local administration.

The article is available on Science Advances' website by clicking on this link: https://www.science.org/doi/10.1126/sciadv.adn9857

About Cellectis

Cellectis is a clinical-stage biotechnology company using its pioneering gene-editing platform to develop life-saving cell and gene therapies. Cellectis utilizes an allogeneic approach for CAR T immunotherapies in oncology, pioneering the concept of off-the-shelf and ready-to-use gene-edited CAR T-cells to treat cancer patients, and a platform to make therapeutic gene editing in hemopoietic stem cells for various diseases. As a clinical-stage biopharmaceutical company with 25 years of experience and expertise in gene editing, Cellectis is developing life-changing product candidates utilizing TALEN®, its gene editing technology, and PulseAgile, its pioneering electroporation system to harness the power of the immune system in order to treat diseases with unmet medical needs. Cellectis' headquarters are in Paris, France, with locations in New York, New York and Raleigh, North Carolina. Cellectis is listed on the Nasdaq Global Market (ticker: CLLS) and on Euronext Growth (ticker: ALCLS).

To find out more, visit our website: www.cellectis.com

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Forward-looking Statements

This press release contains "forward-looking" statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as ""can," "possibility," and "suggest" or the negative of these and similar expressions. These forward-looking statements, which are based on our management's current expectations and assumptions and on information currently available to management, include statements about the potential of the product candidate MUC1, and reproducibility of these preclinical data on humans. These forward-looking statements are made in light of information currently available to us and are subject to numerous risks and uncertainties, including with respect to the numerous risks associated with biopharmaceutical product candidate development. Furthermore, many other important factors, including those described in our Annual Report on Form 20-F and the financial report (including the management report) for the year ended December 31, 2023 and subsequent filings Cellectis makes with the Securities Exchange Commission from time to time, as well as other known and unknown risks and uncertainties may adversely affect such forward-looking statements and cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

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