

PRESS RELEASE

Cellectis Presents First Preclinical Data on UCARTMESO, an Allogeneic CAR-T Cell Product Candidate Targeting Mesothelin to Treat Solid Tumors at the Annual Meeting of the Society for Immunotherapy of Cancer

November 12, 2021 – New York – Cellectis S.A. (NASDAQ: CLLS – EURONEXT GROWTH: ALCLS) (the "Company"), a clinical-stage gene-editing company employing its core technology to develop products based on gene-editing with a portfolio of allogeneic chimeric antigen receptor (CAR-)T cells in the field of immuno-oncology and gene-edited hematopoietic stem cells in other indications, announced the first preclinical data on UCARTMESO, its allogeneic CAR-T cell product candidate targeting mesothelin, being developed for patients with mesothelin-expressing solid tumors.

The data were presented today in a poster session at the Society for Immunotherapy of Cancer (SITC) 36th Annual Meeting titled "Mesothelin (MSLN) targeting allogeneic CAR-T cells engineered to overcome tumor immunosuppressive microenvironment". Poster # 143.

The poster presentation highlighted the following preclinical data:

- Mesothelin is an interesting target for CAR-T cell therapy for solid tumors because it is highly
 and consistently expressed in mesothelioma and pancreatic cancers. It is also overexpressed in subsets of other solid tumors (ovarian cancer, non-small cell lung cancer,
 gastric cancer, triple-negative breast cancer) while modestly expressed in healthy cells,
 indicating that targeting mesothelin may result in a safe and effective therapy.
- UCARTMESO product candidate is composed of allogeneic non-alloreactive T cells edited
 with TALEN®-encoding mRNAs to disrupt TRAC, CD52 and TGFBR2 genes, and transduced
 ex vivo with a recombinant lentiviral vector (rLV) to express a second-generation CAR
 targeting MSLN. It is the first TALEN®-induced triple knock out (KO) product candidate in the
 allogeneic CAR-T space.
- The preclinical data demonstrated potent activity of UCARTMESO in vitro and in vivo against MSLN expressing cell lines, and in vivo activity in pancreatic and pleural mesothelioma mouse models.
- Due to TGFBR2 KO, UCARTMESO was shown to restore IL2RA upregulation upon in vitro activation, even in media rich in TGFB1, which contributes to the immune suppressive microenvironment in tumors.

Laurent Poirot, PhD, Senior Vice President Immunology, noted: "Overall, the data demonstrated that the TGFBR2 gene knock out provides valuable additional properties to UCARTMESO, which may result in a very effective therapy despite an immune suppressive tumor microenvironment, and supports its clinical development for the treatment of solid tumors."

A copy of the presentation will be available on Cellectis' website here, shortly after the event.

About Cellectis

Cellectis is a gene editing company, developing first of its kind therapeutic products. 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 over 21 years of 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.

As part of its commitment to a cure, Cellectis remains dedicated to its goal of providing lifesaving UCART product candidates for multiple cancers including acute myeloid leukemia (AML), B-cell acute lymphoblastic leukemia (B-ALL) and multiple myeloma (MM). .HEAL is a new platform focusing on hemopoietic stem cells to treat blood disorders, immunodeficiencies and lysosomial storage diseases.

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).

For more information, visit www.cellectis.com Follow Cellectis on social media: @cellectis, LinkedIn and YouTube.

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Forward-looking Statements

This presentation 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 "at this time," "anticipate," "believe," "expect," "on track," "plan," "scheduled," and "will," 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 our research and development projects and priorities, our pre-clinical project development efforts and the timing of our presentation of data. 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 as well as the duration and severity of the COVID-19 pandemic and governmental and regulatory measures implemented in response to the evolving situation. With respect to our cash runway, our operating plans, including product development plans, may change as a result of various factors, including factors currently unknown to us. 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, 2020 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.