PRESS RELEASE

Cellectis Presents Preclinical Data from its First Allogeneic Dual CAR T-cell Product Candidate UCART20x22 for Patients with Relapsed or Refractory Non-Hodgkin Lymphoma at the American Association for Cancer Research (AACR) 2022 Annual Meeting

- *Preclinical data demonstrated POC with robust in vitro and in vivo anti-tumor activity*
- *UCART20x22 allogeneic dual CAR T has been designed and engineered on the TRAC / CD52 TALEN® platform*
- *UCART20x22 expected to be Cellectis' first product candidate fully designed, developed and manufactured in-house*
- *IND for UCART20x22 expected to be filed this year*

April 8, 2022-- **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 released preclinical data on its product candidate UCART20x22 at the American Association for Cancer Research (AACR) Annual Meeting. The data showed robust pre-clinical proof of concept with the potential to overcome common mechanisms of resistance to CAR T-cell therapies in relapsed or refractory Non-Hodgkin Lymphoma (r/r NHL), such as single-antigen escape or tumor heterogeneity.

UCART20x22 is Cellectis' first allogeneic dual CAR T-cell product candidate being developed for patients with r/r NHL. It features TALEN®-mediated disruptions of the *TRAC* gene (to reduce the risk of graft-versus-host disease) and of the *CD52* gene (to permit use of a CD52-directed monoclonal antibody in patients' preconditioning) to enhance CAR T engraftment, expansion and persistence.

Dual targeting of CD20 and CD22, both validated targets in B-cell malignancies, is designed to enhanced tumor cell killing and to prevent immune escape due to single-antigen targeting. UCART20x22 has the potential to offer an alternative to CD19-directed therapies and CD19 negative relapses.

The poster presentation at AACR highlighted the following preclinical data:

- UCART20x22 showed strong activity against tumor cell lines expressing either a single antigen, CD20 or CD22, or both simultaneously.

- *In vivo* pre-clinical models demonstrate that UCART20x22 efficiently eradicates tumors expressing both or either antigen, and sustained presence of UCART20x22 cells was observed in the bone marrow after tumor clearance.

- *In vitro* assays against primary cells from Non-Hodgkin Lymphoma patients with diverse CD22 and CD20 antigen levels demonstrate that UCART20x22 has potent and specific cytotoxic activity.

"We are very excited to share these encouraging preclinical data at AACR that support the transition of UCART20x22 into the clinic. Cellectis' UCART20x22 further validates CD20 and CD22 targets in B-cell malignancies, provides an opportunity to overcome some of the current challenges, and represents a potential therapeutic alternative to CD19-directed therapies. Moreover, manufacturing UCART20x22 from healthy donors holds the potential of an allogeneic CAR T-cell option for r/r NHL patients with enhanced activity." said Beatriz Aranda Orgilles, Ph.D., Team Leader, Immuno-Oncology at Cellectis.

UCART20x22 is expected to be Cellectis' first product candidate fully designed, developed and manufactured in-house, showcasing the Company's transformation into an end-to-end cell and gene therapy platform from discovery, product development, GMP manufacturing, to clinical development.

An Investigational New Drug application (IND) for UCART20x22 is expected to be filed this year.

Title: UCART20x22: First allogeneic dual CAR T-cell therapy for the treatment of B-cell malignancies

Date: April 10, 2022 at 1:30 p.m. ET
Location: New Orleans Convention Center, Exhibit Halls D-H, Poster Section 36
Session Title: Adoptive Cell Therapy 1
Poster Board Number: 5
Abstract Number: 551

E-posters will be available on the AACR website to registrants of the AACR Annual Meeting at 1:00 p.m. EDT on Friday, April 8, linked here.

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 over 22 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. 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 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 "anticipate," "believe," "intend", "expect," "plan," "scheduled," "could" 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. Forward-looking statements include statements about the timing of our presentation of data and submission of regulatory filings, the adequacy of our supply of clinical vials, the operational capabilities at our manufacturing facilities, and the sufficiency of cash to fund operation. 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, 2021 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.