PRESS RELEASE

Cellectis Implements CLLS52 for the First Time in the Clinic with Sanofi's Alemtuzumab

- *Cellectis demonstrated that the addition of alemtuzumab to the lymphodepletion regimen was associated with prolonged lymphodepletion and significantly higher cell expansion and clinical activity*

New York (NY) – April 24, 2023 – 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, announced it has implemented the use of alemtuzumab as a Cellectis Investigational Medicinal Product (IMP), coded as CLLS52, as part of the lymphodepletion regimen for UCART22 in the BALLI-01 clinical trial in relapsed/refractory B-cell ALL, for UCART123 in the AMELI-01 clinical trial in relapsed/refractory AML, and for UCART20x22 in the NatHaLi-01 clinical trial in relapsed/refractory B-cell NHL.

In May 2021, Cellectis entered into partnership and supply agreements with Sanofi regarding alemtuzumab. Under the agreements, Sanofi is supplying alemtuzumab to support Cellectis' clinical trials and the parties agreed to enter into discussions to execute a commercial supply of alemtuzumab under pre-agreed financial conditions.

"As previously reported, the importance of alemtuzumab in the lymphodepletion regimen was demonstrated in our BALLI-01 and AMELI-01 studies, where the addition of this lymphodepletion agent to the fludarabine and cyclophosphamide regimen was associated with sustained lymphodepletion and significantly higher UCART cell expansion allowing for greater clinical activity. We believe these encouraging outcomes are a meaningful step forward to a safe, effective, and controllable therapeutic window for our allogeneic CAR T-cell product candidates" said Mark Frattini, M.D., Ph.D., Chief Medical Officer at Cellectis.

Cellectis is the inventor of the combination of *CD52* knockout UCART cells with a lymphodepleting regimen containing an anti-*CD52* antibody such as alemtuzumab. The *CD52* knockout aims to render UCART product candidates resistant to alemtuzumab as part of the lymphodepleting regimen. Patients' lymphodepleting regimens reduce host immune cells and should improve allogeneic CAR T-cell expansion and persistence. Cellectis' UCART22, UCART123 and UCART20x22 product candidates have the *CD52* gene inactivated by TALEN® gene editing technology.

To access Cellectis' 2022 ASH data release and Live Webcast release announcing positive preliminary data from the BALLI-01 and AMELI-01 clinical studies, click here:

https://cellectis.com/en/press/cellectis-announces-positive-preliminary-clinical-data-for-ucart22-in-all-and-ucart123-in-aml/

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

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," "would" 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 advancement, timing and progress of clinical trials, the adequacy and continuity of supply of clinical supply and alemtuzumab, the ability of an anti-CD52 as alemtuzumab to improve any efficacy and the potential benefit of UCART product candidates. 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. 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, 2022 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.

For further information, please contact:

Media contact:

Pascalyne Wilson, Director, Communications, +33 (0)7 76 99 14 33, media@cellectis.com

Investor Relation contacts:

Arthur Stril, Chief Business Officer, +1 (347) 809 5980, investors@cellectis.com

Ashley R. Robinson, LifeSci Advisors, +1 617 430 7577