PRESS RELEASE

Cellectis Establishes an At-The-Market (ATM) Program on Nasdaq

- *Maximum Potential Dilution of Approximately 23.04%, Based on Share Capital of Cellectis as of September 30, 2022*

New York, NY, January 4, 2023 – Cellectis S.A. ("Cellectis" or 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 announced that it has filed a prospectus supplement with the Securities and Exchange Commission ("SEC"), pursuant to which it may offer and sell to eligible investors a maximum gross amount of up to $60.0 million of American Depositary Shares ("ADS"), each representing one ordinary share of Cellectis, nominal value €0.05 per share, from time to time in sales deemed to be an "at the market offering" pursuant to the terms of a sales agreement with Jefferies LLC ("Jefferies"), acting as sales agent. The timing of any sales will depend on a variety of factors. The at-the-market ("ATM") program is presently intended to be effective through the expiration of the existing registration statement, i.e. July 6, 2025, unless terminated prior to such date in accordance with the sales agreement or the maximum amount of the program has been reached.

The ADSs are listed on the Nasdaq Global Market under the symbol "CLLS", and the Company's ordinary shares are listed on Euronext Growth in Paris under the symbol "ALCLS".

The Company plans to use the net proceeds, if any, of sales of ADSs issued under the ATM program to fund the continued clinical development of UCART 123, UCART22, UCART20x22, and UCARTCS1, and any remainder for working capital and other general corporate purposes.

Jefferies, as sales agent, will use commercially reasonable efforts to arrange on the Company's behalf for the sale of all ADSs requested to be sold by the Company, consistent with Jefferies' normal sales and trading practices. Sales prices may vary based on market prices and other factors. Only eligible investors (as described in greater detail below) may purchase ADSs under the ATM program. In any case, the corresponding sales price of the new ordinary shares underlying the ADSs will not be less than the volume weighted-average of the trading prices of the Company's ordinary shares on Euronext Growth in Paris over the three trading days prior to the relevant pricing date, subject to a maximum discount to such volume weighted-average price of 15%.

The ADSs and the underlying ordinary shares will be issued through a capital increase without shareholders' preferential subscription rights under the provisions of Article L. 225-138 of the French Commercial Code (*Code de commerce*) as decided by the board of directors (the "Board") of Cellectis on December 15, 2022 pursuant to the 11th and/or 13th resolutions adopted by the Combined General Meeting of Shareholders held on June 28, 2022 (or any substitute resolutions,

adopted from time to time), within the limit of a maximum number of 13,645,293 ordinary shares (being the maximum authorized by the shareholders for each such resolution), representing a maximum potential dilution of approximately 23.04% based on the share capital of the Company as of September 30, 2022.

The ATM program may only be issued to the categories of investors defined in the 11th and/or 13th resolutions (or any similar resolutions that may be substituted to them in the future), comprising (i) any person or legal entity, whether French or foreign (*i.e.,* non-French), that invests on a regular basis or has invested at least €5 million over the preceding 36 months in the health or biotechnology sector and/or (ii) any industrial company, institution or entity, whether French or foreign (*i.e.,* non-French), active in the health or biotechnology sectors or any affiliate thereof. The new ordinary shares will be admitted to trading on the market of Euronext Growth in Paris and the issued ADSs will trade on Nasdaq.

During the term of the ATM program, the Company will include, in the publication of its quarterly results, information about its use of the program during the preceding quarter and will also provide an update after each capital increase on a dedicated location on its corporate website in order to inform investors about the main features of each issue that may be completed under the ATM program from time to time and, as the case may be, will publish a press release if required by applicable law or regulation.

A shelf registration statement on Form F-3 (including a prospectus) relating to Cellectis' ADSs was filed with the SEC and was declared effective on July 7, 2022. Before purchasing ADSs in the ATM program, prospective investors should read the prospectus supplement and the accompanying prospectus, together with the documents incorporated by reference therein. Prospective investors may obtain these documents for free by visiting EDGAR on the SEC's website at www.sec.gov. Alternatively, a copy of the prospectus supplement (and accompanying prospectus) relating to the ATM program may be obtained from Jefferies LLC, 520 Madison Avenue, New York, NY 10022 or by telephone at +1 (877) 821-7388 or by email at Prospectus_Department@Jefferies.com. There will be no prospectus subject to the approval of the *Autorité des Marchés Financiers*. The Company disclosed in a press release on December 28, 2022 that it entered into a finance contract with the European Investment Bank ("EIB") on December 28, 2022, which is further described, in particular with respect to the warrants to be issued to the EIB, if any, in a report on Form 6-K dated January 4, 2023 and incorporated by reference in the prospectus supplement, and which is available on the Company's website at https://cellectis.com/en/investors/sec-filings/. Further, the prospectus supplement also incorporates by reference a report on Form 6-K dated January 4, 2022 that on December 31, 2022, Alain Godard informed the Board of his resignation as a member of the Board, effective immediately. Mr. Godard's resignation from the Board did not result from any disagreement with Cellectis.

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 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).

Special Note Regarding Forward-Looking Statements

This press release contains "forward-looking" statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding Cellectis' proposed securities offering by way of an ATM program and Cellectis' intended use of proceeds, if any, from sales of ADSs issued under the ATM program. Words such as "anticipates," "believes," "expects," "intends," "projects," "anticipates," and, "future" or,", "can," "could,", "is designed to," "may," "might," "plan," "potential," "predict," "objective,", "scheduled," "should," and "will," or the negative of these and similar expressions are intended to identify forward-looking statements. These forward-looking statements, which are based on our management's current expectations and assumptions and on information currently available to management. These forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those implied by the forward-looking statements, such as: market conditions, including the trading price and volatility of Cellectis' ADSs and ordinary shares, and risks related to Cellectis' business and financial performance. Further information on the risk factors that may affect company business and financial performance is included in Cellectis' Annual Report on Form 20-F for the year ended December 31, 2021 and subsequent filings Cellectis makes with the SEC from time to time which are available on the SEC's (website at www.sec.gov). The forward-looking statements included in this press release speak only as of the date of this press release, and except as required by law, Cellectis assumes no obligation to update these forward-looking statements publicly.

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Disclaimers

This press release does not constitute an offer to sell nor a solicitation of an offer to buy, nor shall there be any sale of ordinary shares or ADSs in any state or jurisdiction in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

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This announcement is not an advertisement and not a prospectus within the meaning of Prospectus Regulation.

With respect to the member States of the European Economic Area, no action has been undertaken or will be undertaken to make an offer to the public of the securities referred to herein requiring a publication of a prospectus in any relevant member State. As a result, the securities may not and will not be offered in any relevant member State except in accordance with the exemptions set forth in Article 1 (4) of the Prospectus Regulation or under any other circumstances which do not require the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Regulation and/or to applicable regulations of that relevant member State.

This document is only being distributed to, and is only directed at, persons in the United Kingdom that (i) are "investment professionals" falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations, etc.") of the Order, or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Article 21 of the Financial Services and Markets Act 2000) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "Relevant Persons"). This document is directed only at Relevant Persons and must not be acted on or relied on by persons who are not Relevant Persons. Any investment or investment activity to which this document relates is available only to Relevant Persons and will be engaged in only with Relevant Persons.

MIFID II product governance / Retail investors, professional investors and ECPs only target market - Solely for the purposes of each manufacturer's product approval process, the target market assessment in respect of the new shares has led to the conclusion that: (i) the target market for the new shares is retail investors, eligible counterparties and professional clients, each as defined in MiFID II; and (ii) all channels for distribution of the new shares to retail investors, eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the new shares (a "distributor") should take into consideration the manufacturers' target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the new shares (by either adopting or refining the manufacturers' target market assessment) and determining appropriate distribution channels. For the avoidance of doubt, even if the target market includes retail investors, the manufacturers have decided that the new shares will be offered, as part of the ATM program, only to eligible counterparties and professional clients.