UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of December 2022

Commission File Number: 001-36891

Cellectis S.A. (Exact Name of registrant as specified in its charter)

8, rue de la Croix Jarry 75013 Paris, France +33 1 81 69 16 00 (Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F [X] Form 40-F []

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

EXHIBIT INDEX

Exhibit <u>Title</u>

<u>99.1</u> <u>Press release, dated December 22, 2022</u>

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Cellectis S.A. (Registrant)

Date: December 22, 2022

/s/ André Choulika André Choulika Chief Executive Officer

Cellectis Announces First Dosing of a Patient with its In-house Manufactured Product Candidate UCART22 for the treatment of r/r B-cell ALL

• The first patient completed the 28-day Dose Limiting Toxicity (DLT) observation period without complication

NEW YORK, Dec. 22, 2022 (GLOBE NEWSWIRE) -- 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 announced that for the first time, a patient was dosed in the United States with its in-house manufactured product candidate UCART22, and completed the 28 day DLT period on December 14th, 2022, without complication.

"First dosing of a patient with a product candidate manufactured in-house is a major milestone for Cellectis. UCART22 has been developed to potentially offer a therapeutic alternative for patients with r/r B-ALL, including patients that have relapsed from or unable to receive CD19-directed therapy. The ability to have our manufacturing completely in-house maximizes the chances that eligible patients can be treated without delay." said Mark Frattini, M.D., Ph.D., Chief Medical Officer at Cellectis.

"This is a transformational step forward for Cellectis: our in-house manufacturing capabilities would allow us to move product candidates like UCART22 from R&D to development to a finished UCART product on a timeline that would not have been possible working with a contract manufacturer," said Steven Doares, Senior Vice President, US Manufacturing & Raleigh Site Head. "We believe that having this capability in-house is a great competitive advantage as it would give us the ability to swiftly version our product candidates as we monitor clinical responses, resulting in what we expect to be the best product possible."

UCART22 is an allogeneic CAR T-cell product candidate that targets CD22 and is evaluated in the BALLI-01 clinical study, a Phase 1/2a open-label dose-escalation study designed to evaluate the safety and clinical activity of the product candidate in patients with relapsed or refractory B-cell acute lymphoblastic leukemia (r/r B-ALL).

Three years ago, Cellectis made the decision to build its proprietary GMP manufacturing facilities in both Raleigh (North Carolina) and Paris to take control of its production and manufacturing timelines. Cellectis' facilities are fully operational, showcasing the Company's transformation into an end-to-end cell and gene therapy company, from discovery & product development, transfer, and cGMP manufacturing to clinical development.

As of now, Cellectis is one of the few end-to-end gene editing, allogeneic CAR T-cell companies that control its gene and cell therapy process from start to finish.

BALLI-01 is actively enrolling patients with relapsed or refractory B-ALL.

For more information, eligibility criteria and trial locations, please visit www.clinicaltrials.gov (NCT04150497) or contact clinicaltrials@cellectis.com

About Acute Lymphoblastic Leukemia

Acute lymphoblastic leukemia (ALL) is a cancer of the lymphoid line of blood cells characterized by the development of large numbers of immature lymphocytes. ALL accounts for 0.3% of all new cancer cases, and 0.3% of all cancer deaths. It is estimated that 6,660 new cases of ALL and 1,560 deaths related to the disease occurred in the US in 2022. ALL represents 12% of all leukemia cases, progresses rapidly, and is typically fatal within weeks or months if left untreated¹.

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 offthe-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. 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 lysosomal 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, visitwww.cellectis.com

Follow Cellectis on social media: @cellectis, LinkedIn and YouTube.

For further information, please contact:

Media contacts:

Pascalyne Wilson, Director, Communications, +33776991433, media@cellectis.com Margaret Gandolfo, Senior Manager, Communications, +1 (646) 628 0300

Investor Relation contact:

Arthur Stril, Chief Business Officer, +1 (347) 809 5980, investors@cellectis.com Ashley R. Robinson, LifeSci Advisors, +1 (617) 430 7577

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," "potentially" "scheduled," "could," "may," "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 (including with respect to patient enrollment and follow-up), the potential of our preclinical programs and product candidates, the operational capabilities at our manufacturing facilities and the sufficiency of cash to fund operations. 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 vear 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 forwardlooking 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.

¹ SEER reference

Attachment

UCART-P2 version2_ENGLISH (https://ml.globenewswire.com/Resource/Download/35b6cc7a-b617-45a2-8348-664d6c63052c)