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

Date of Report: August 1, 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 [X]

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 Title

99.1 Press Release dated August 1, 2022

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: August 1, 2022

/s/ André Choulika André Choulika Chief Executive Officer

Cellectis Receives IND clearance for UCART20x22, its First in-house Manufactured Product Candidate for the Treatment of B-cell Malignancies

- UCART20x22 is Cellectis' first allogeneic dual CAR T, targeting CD20 and CD22 simultaneously
- UCART20x22 is Cellectis' first product candidate fully designed, developed and manufactured in-house
 - Phase 1/2a clinical trial NatHaLi-01 expected to begin in second half of the year

NEW YORK, Aug. 01, 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 the U.S. Food and Drug Administration (FDA) has cleared Cellectis' Investigational New Drug (IND) application to initiate a Phase 1/2a clinical trial of UCART20x22 for patients with relapsed or refractory Non-Hodgkin Lymphoma (r/r NHL). The Company plans to begin enrolling patients in the NatHaLi-01 study in the second half of the year.

"We are delighted that the FDA has cleared our IND application for UCART20x22," said André Choulika, PhD, Chief Executive Officer of Cellectis. "This is a very exciting product candidate, for two reasons: UCART20x22 will be our first dual allogeneic CAR T product candidate to enter clinical development, and dual targeting of CD20 and CD22, both validated targets in B-cell malignancies, has the potential to enhance tumor cell killing and increases the breadth of antigen targeting. These advantages may increase the addressable patient population and represent a potential therapeutic alternative to CD19-directed therapies.

UCART20x22 is also our first product candidate with fully integrated in-house development, showcasing our transformation into an end-to-end cell and gene therapy company, from discovery, process development, and GMP manufacturing to clinical development. We are very excited to start the clinical trial for patients with relapsed or refractory Non-Hodgkin Lymphoma."

UCART20x22 features TALEN $^{\circledR}$ -mediated disruptions of the *TRAC* gene (that has been shown to reduce the risk of graft-versus-host disease) and of the *CD52* gene (to allow using a CD52-directed monoclonal antibody in patients' preconditioning regimen and enhancing CAR T engraftment, expansion and persistence).

The Dose Finding portion of the study will evaluate UCART20x22 in a broad range of mature B-cell Non-Hodgkin lymphomas (NHL) which accounts for approximately 4% of all cancers¹. It is estimated that 81,560 new cases of NHL and 20,720 deaths related to the disease occurred in the US in 2021², and 122,979 new cases of NHL and 49,684 deaths related to NHL occurred in Europe in 2020³.

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).

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

For further information, please contact:

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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," "may" 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 enrollment of patient in our clinical study, the adequacy of our supply of clinical vials, the operational capabilities at our manufacturing facilities, the test results and certification to be performed on the product candidate, the potential of our product candidate 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. 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.

Attachment

• IND PR_ FINAL (https://ml.globenewswire.com/Resource/Download/d73cd616-2239-45fe-bded-f0a589355418)

¹ https://seer.cancer.gov/statfacts/html/nhl.html

² Siegel et al 2021-- https://acsjournals.onlinelibrary.wiley.com/doi/10.3322/caac.21654

³ International Agency for Research on Cancer 2020