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 26, 2024

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 []

EXHIBIT INDEX

Exhibit Title

99.1 Press release, dated August 26, 2024

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 26, 2024

/s/ André Choulika André Choulika Chief Executive Officer

Cellectis Publishes a Molecular Therapy Article on a SMART DUAL CAR T-cell Approach for Treating Recalcitrant Solid Tumors

NEW YORK, Aug. 26, 2024 (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 published an article in Molecular Therapy demonstrating TALEN®-mediated gene editing capabilities for design of SMART DUAL CAR T-cells, which efficiently target immunotherapy recalcitrant solid tumors while mitigating potential safety risks.

Adoptive cell therapy based on CAR T cells has proven to be lifesaving for many cancer patients. However, its therapeutic efficacy has so far been restricted to only a few malignancies, with solid tumors proving to be especially recalcitrant to efficient therapy.

One key factor for this are cancer-associated fibroblasts (CAFs), that modulate the tumor microenvironment (TME) to inhibit T cell infiltration and induce T cell dysfunction. Additionally, the sparsity of tumor-specific antigens (TSA) and expression of CAR-directed tumor-associated antigens (TAA) on normal tissues often results in on-target off-tumor cytotoxicity, raising safety concerns.

Using TALEN® gene editing technology, Cellectis presents an innovative CAR T cell engineering strategy designed to overcome these challenges. Our allogeneic SMART CAR T-cells are designed to express a constitutive CAR, targeting FAP⁺ CAFs in solid tumors, and a second inducible CAR, expressed only in the presence of FAP+ CAFs and targeting the tumor associated antigen (TAA) named mesothelin. The resultant SMART Dual CAR T-cells efficiently infiltrate and efficiently target triple-negative breast tumors in physiologically relevant mice models, with no observable on-target, off-tumor toxicity.

"The adaptations of this approach could resolve several key challenges for CAR T-cell therapy against solid tumor-low CAR T-cell infiltration, immuno-suppressive microenvironment, antigen heterogeneity as well as on target, off-tumor toxicity. This strategy thus has significant implications for successful therapeutic development of CAR T-cells against solid tumors" said Shipra Das, Ph.D., Associate Director Immuno-Oncology and Innovation Program Management at 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 25 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).

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 "designed to," and "could" 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 about the potential of the research and development programs of the Company. These forward-looking statements are made in light of information currently available to us and are subject to unmerous 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, 2023 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 on Cellectis, please contact:

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Attachment

 $\bullet \quad Cellect is \ Publishes \ an \ Article \ on \ Dual \ CAR \ T(1) \ (https://ml.globenewswire.com/Resource/Download/22d774f8-dc0d-4111-9f13-d61dd9523961)$