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: November 10, 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 November 10, 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: November 10, 2022

/s/ André Choulika
André Choulika
Chief Executive Officer

Cellectis Presents Pre-Clinical Data on TALEN®-edited Smart CAR T-cells Overcoming Key Challenges of Targeting Solid Tumors at SITC 2022

NEW YORK, Nov. 10, 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 preclinical data will be presented on TALEN®-edited smart CAR T-cells overcoming key challenges of targeting solid tumors at the Society for Immunotherapy of Cancer's (SITC) 37th Annual Meeting.

The data will be presented today in two poster sessions titled: "Multi-armored allogeneic MUC-1 CAR T-cells efficiently control triple negative breast cancer tumor growth" (**Poster Number: 217**) and "TALEN®-edited smart CAR T-cells leverage solid tumor microenvironment for specific and effective immunotherapy" (**Poster Number: 325**).

The poster presentations highlight the following preclinical data:

Multi-armored allogeneic MUC-1 CAR T-cells efficiently control triple negative breast cancer tumor growth

- This poster highlights TALEN®-edited smart CAR T-cells targeting MUC1- expressing solid tumors.
- MUC1 is a tumor-associated antigen that is overexpressed in triple-negative breast cancer (TNBC) and other solid tumor malignancies.
- MUC-1 CAR T-cells infiltrate tumors more efficiently and extend survival when enhanced with attributes catered towards the tumor microenvironment (TME) of TNBC tumors.
- TGFBR2 knock-out (KO) circumvents the inhibitory effects of TGFβ1, and IL-12 release follows CAR T-cell activation pattern restricting it to the tumor site for increased safety.
- Enhanced MUC-1 CAR T-cells could address some of the current challenges in development of CAR Ts for TNBC patients with unmet medical needs.
- Overall, we can efficiently generate allogeneic CAR T-cells and engineer them to overcome several key challenges of immune suppressive solid tumors.

TALEN®-edited smart CAR T-cells leverage solid tumor microenvironment for specific and effective immunotherapy

- This poster highlights innovative T-cell engineering strategies designed to increase the activity of CAR T-cells for solid tumors while mitigating toxicity risk.
- Therapeutic efficacy of CAR T-cell therapy has so far been restricted to only a few malignancies, with solid tumors proving to be especially recalcitrant to efficient therapy. Our TALEN®-based gene editing platform allows innovative T cell engineering strategies that can combat some of the challenges posed by CAR T cell development for solid tumors.
- Inducible expression of a tumor-antigen directed CAR by a constitutive CAR specific to TME cues greatly enhanced anti-tumor activity, while limiting 'on target, off-tumor' cytotoxicity. Additionally, CAR-induced gene expression could boost anti-tumor CART only within the TME.
- Cellectis' gene editing strategies could increase CAR T cell persistence and anti-tumor activity while staying restricted to the tumor milieu.
- This proof-of-concept study demonstrates the feasibility of developing CART cell engineering strategies that can improve solid tumor targeting while mitigating potential safety risks, paving the way for clinical development.

Laurent Poirot, Ph.D., Senior Vice President Immunology at Cellectis, noted:

"Using our TALEN®-based gene editing platform, we have presented innovative T cell engineering strategies that can combat some of the challenges posed by CAR T cell development for solid tumors. We are mitigating potential safety risks, paving the way for clinical development for patients with unmet medical needs."

Presentations will occur today, from 9:00AM until 9:00PM ET, Hall C.

A copy of both poster presentations will be available on Cellectis' website here, shortly after the event.

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.

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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 potential of our preclinical programs and 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, 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 forwardlooking 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 forwardlooking statements, even if new information becomes available in the future.

Attachment

• SITC DATA PR (https://ml.globenewswire.com/Resource/Download/aadf271e-9bfb-4a61-bcfd-d03cd831d4ba)