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 of the Securities Exchange Act of 1934

Date of Report: January 6, 2020 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 ⊠ 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): \Box
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): \Box

EXHIBIT INDEX

Exhibit <u>Title</u>

99.1 Press release, dated January 6, 2020.

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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)

January 6, 2020 By: <u>/s/</u> André Choulika

André Choulika Chief Executive Officer

Cellectis: An Expert Review on Allogeneic CAR-T for Cancer Published in Nature Reviews Drug Discovery

Cellectis and World Experts Review New Avenue of Allogeneic CAR T-cells, Optimization and Promises in Oncology

NEW YORK--(BUSINESS WIRE)--January 6, 2020--Cellectis (Paris:ALCLS) (NASDAQ:CLLS) (Euronext Growth:ALCLS; Nasdaq:CLLS), a biopharmaceutical company focused on developing immunotherapies based on gene-edited allogeneic CAR T-cells (UCART), announced today the publication of a review in *Nature Reviews Drug Discovery* by Prof. Stéphane Depil^{1*}, Dr. Philippe Duchateau², Prof. Stephan Grupp³, Prof. Ghulam Mufti⁴ and Dr. Laurent Poirot². The authors review the opportunities and challenges presented by universal allogeneic CAR T-cell therapies.

One of the most promising approaches in cancer treatment is chimeric antigen receptor (CAR) T-cell therapy, in which part of the body's own immunological defendors, T-cells, are redirected against cancerous cells after being engineered to express CARs. Since their initial development in the early 90s, CAR T-cells have evolved through several generations. The use of autologous (patient-derived) CAR T-cells has proven to be successful in treating people with certain blood cancers such as B-cell malignancies. However, autologous CAR T-cell therapy is not suitable for all patients, and it often requires a long and expensive manufacturing process since each treatment must be made individually for each patient.

Cellectis was the first company to develop and test an allogeneic CAR T-cell therapy in patients, where T-cells are derived from healthy donors. This gives rise to off-the-shelf product candidates which aim to be suitable for many patients as opposed to only a single person.

"We realized early on that refined gene-editing techniques were what was needed to take an allogeneic approach to CAR T-cell therapy," said Dr. Laurent Poirot, VP, Immunology Division, Cellectis. "Despite the complexity of this approach, we decided to follow this route because we are confident that it can provide the most impact for a maximum number of people living with severe cancers. This comprehensive review underlines just how much this technology has evolved in very little time. It also gives us exciting areas to explore as we continue to improve our product candidates."

One of the major challenges in the allogeneic approach involves mitigating the risk of graft-versus-host-disease (GvHD) — a medical complication that can present itself in people that have received tissues or cells from another person. The review examines aspects of this challenge and helps weigh the pros and cons associated with the different methods used to create allogeneic CAR T-cells. It also outlines some of the gene-editing work that Cellectis has done in this area along with complementary approaches being taken by others in the field, such as using cells other than conventional T-cells, also known as alpha beta T-cells.

"Our immune system, including our T-cells, is incredibly sophisticated. We know that T-cells can now be retasked to successfully fight cancer. There are amazing approaches to gene editing that are driving progress towards the most safe and efficacious versions of allogeneic products. It is exciting to see these approaches applied to 'off the shelf' CAR T-cell products," said Prof. Stephan Grupp, Chief of Cell Therapy and Transplant Section at the Children's Hospital of Philadelphia, Professor of Pediatrics at the Perelman School of Medicine, and a member of Cellectis' Clinical Advisory Board. "I'm looking forward to seeing emerging clinical data as well as even newer approaches, as Cellectis' expertise in gene-editing technology continues to transform CAR-T."

Off-the-shelf' allogeneic CAR T cells: new development and current challenges

Stéphane Depil^{1*}, Philippe Duchateau², Stephan Grupp³, Ghulam Mufti⁴, Laurent Poirot²

- ¹Formerly Cellectis, now Centre Léon Bérard and Centre de Recherche en Cancérologie de Lyon, 28 rue Laennec, 69008 Lyon, France
- ²Cellectis, 8 rue de la Croix Jarry, 75013, Paris, France
- ³Children's Hospital of Philadelphia and Perelman School of Medicine, University of Pennsylvania, 3401 Civic Center Blvd Philadelphia, PA 10104, USA
- ⁴King's College London and King's College Hospital, Denmark Hill, London, SE5 9RS, United Kingdom

About Cellectis

Cellectis is developing the first of its kind allogeneic approach for CAR-T therapies, pioneering the concept of off-the-shelf and ready-to-use gene-edited CAR-T cells to treat patients. As a clinical-stage biopharmaceutical company with over 20 years of expertise in gene editing, we are developing game-changer product candidates in immune-oncology. Utilizing TALEN®, our gene editing technology, and PulseAgile, our pioneering electroporation system, we are harnessing the power of the immune system to target and eradicate cancer cells.

As part of our commitment to a cure, Cellectis remains dedicated to its goal of providing life-saving UCART product candidates to address unmet need for multiple cancers including B-cell acute lymphoblastic leukemia (B-ALL), non-Hodgkin lymphoma (NHL) and multiple myeloma (MM). Cellectis is listed on the Nasdaq (ticker: CLLS) and on Euronext Growth (ticker: ALCLS).

Cellectis headquarters are in Paris, France, with additional locations in New York, New York and Raleigh, North Carolina. For more information, visit www.cellectis.com.

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

TALEN® is a registered trademark owned by Cellectis.

Disclaimer

This press release contains "forward-looking" statements that are based on our management's current expectations and assumptions and on information currently available to management. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Further information on the risk factors that may affect company business and financial performance is included in Cellectis' Annual Report on Form 20-F and the financial report (including the management report) for the year ended December 31, 2018 and subsequent filings Cellectis makes with the Securities Exchange Commission from time to time. 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.

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