# 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 23, 2017 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):
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>

99.1 Press release, dated January 23, 2017.

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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 23, 2017

By: /s/ André Choulika

André Choulika Chief Executive Officer

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#### Cellectis Studies Safety in New CAR Architecture Controlling CAR T-Cell Functions

#### Publication in Scientific Reports, a Nature Publishing Group Journal

NEW YORK--(BUSINESS WIRE)--January 22, 2017--Regulatory News:

Cellectis (Paris:ALCLS) (NASDAQ:CLLS), a biopharmaceutical company focused on developing immunotherapies based on gene edited CAR T-cells (UCART), today announced the publication of a study in *Scientific Reports*, a Nature Publishing Group journal, describing a novel approach to a CAR design with an integrated environmental signal utilizing oxygen concentration to manipulate the CAR T-cell response.

In this report, Alexandre Juillerat, Ph.D. and his collaborators from the Cellectis innovation team designed a new CAR architecture that contains an integrated microenvironment sensor. Low oxygen concentration is recognized as a hallmark of the microenvironment of certain solid tumors. The implementation of the novel oxygen sensitive CAR architecture empowers CAR T-cells with the possibility to auto-regulate (switch on or tune-up) their functions in low oxygen (hypoxic) environments.

With the primary purpose of implementing additional levels of safety to the CAR T-cell technologies, in particular to minimize "ontarget / off-tumor" effects, this study demonstrated the possibility to use peculiarities of the tumor microenvironment to create self-decision making CAR T-cells with impaired functions at high oxygen concentration. The results showed that this system also possessed the key feature to be prone to quickly return to its off state in the absence of the inducing signal (hypoxia), a characteristic that is of prime interest to protect healthy tissues distant from the tumor site. Beyond this first *in vitro* proof of concept, additional studies are expected to fully assess the therapeutic potential of this approach.

#### Alexandre Juillerat, Ph.D. Innovation Senior Scientist

Dr. Alexandre Juillerat, Ph.D., graduated in Chemistry from the University of Lausanne, Switzerland. After receiving in 2006 his Ph.D. in protein engineering from the École Polytechnique Fédérale de Lausanne (EPFL, Switzerland), he moved to the laboratory of Structural Immunology at the Institut Pasteur in Paris, France, performing structure-function studies on a major adhesin of plasmodium falciparum. In 2010, he joined the R&D department of Cellectis in Paris, France, working on the development and implementation of sequence specific designer nucleases including the transcription activator-like effector nucleases TALEN®. He then joined the Cellectis facility based in New York, NY, USA, leading projects associated with the development of the T-cell chimeric antigen receptor (CAR) technology.

#### An oxygen sensitive self-decision making engineered CAR T-cell

Alexandre Juillerat, Alan Marechal, Jean Marie Filhol, Yannick Valogne, Julien Valton, Aymeric Duclert, Philippe Duchateau and Laurent Poirot

#### http://www.nature.com/articles/srep39833

#### **About Cellectis**

Cellectis is a biopharmaceutical company focused on developing immunotherapies based on gene edited CAR T-cells (UCART). The company's mission is to develop a new generation of cancer therapies based on engineered T-cells. Cellectis capitalizes on its 17 years of expertise in genome engineering - based on its flagship TALEN® products and meganucleases and pioneering electroporation PulseAgile technology - to create a new generation of immunotherapies. CAR technologies are designed to target surface antigens expressed on cells. Using its life-science-focused, pioneering genome-engineering technologies, Cellectis' goal is to create innovative products in multiple fields and with various target markets. Cellectis is listed on the Nasdaq market (ticker: CLLS) and on the NYSE Alternext market (ticker: ALCLS). To find out more about us, visit our website: <a href="https://www.cellectis.com">www.cellectis.com</a>

Talking about gene editing? We do it. TALEN® is a registered trademark owned by the Cellectis Group.

#### 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. The risks and uncertainties include, but are not limited to, the risk that the preliminary results from our product candidates will not continue or be repeated, the risk of not obtaining regulatory approval to commence clinical trials on the UCART product candidates, the risk that any one or more of our product candidates will not be successfully developed and commercialized. Further information on the risks factors that may affect company business and financial performance, is included in filings Cellectis makes with the Security Exchange Commission from time to time and its financial reports. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons 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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