

Cellectis to Present Pre-Clinical Data on HSPC Gene Therapy Program and Comprehensive Analysis of TALE-BE at the ESGCT 30th Annual Congress

New York, NY – October 24, 2023 - 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, announced today that they will be showcasing pre-clinical data on its program of gene therapy for HSPC as well as comprehensive analysis of TALE-BE editing determinants at the European Society of Gene and Cell Therapy (ESGCT) 30th annual congress that will take place on October 24-27, 2023 in Brussels, Belgium.

The data will be presented in three posters:

Intronic editing enables lineage specific expression of therapeutics relevant for HSPC gene therapy (Poster N°646)

Presenter: Eduardo Seclen, Senior Scientist & Team Leader, Gene Editing

Date/Time: Wednesday October 25th from 18:15 to 19:30 and Thursday October 26th from 19:30 to 20:30

- Intronic editing enables lineage specific expression of therapeutics relevant for HSPC gene therapy.
- TALEN®-mediated intron editing of the CD11b locus results in the lineage-specific expression of a reporter transgene in myeloid cells, with negligible expression in HSPC or other cellular subsets *in vitro* and *in vivo*.
- We believe this intron editing approach could be disruptive in HSPC gene therapy and brain delivery of multiple therapeutics.

<u>TALEN editing coupled to non-viral DNA delivery enables efficient correction of sickle cell</u> <u>mutation with minimal transcriptional changes and low level of HBB KO</u> (Poster N°380)

Presenter: Julien Valton, VP, Gene Therapy

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- Using a combination of scRNA sequencing and multiple genomic read out methodologies, we demonstrate that the mutant *HBB* gene can be efficiently corrected in HSPCs by TALEN®-mediated gene editing coupled to non-viral gene delivery (ssODN) with a low risk of generating β-thalassemic RBCs.
- TALEN®-mediated HBB editing coupled to non-viral gene delivery (ssODN) in SCD patients' HSPCs led to a lower activation of p53 response compared to viral gene delivery (AAV), preserves the transcriptomic profile of edited HSPCs *in vitro* and their engraftment capacity *in vivo*.

Comprehensive analysis of TALE-BE editing determinant (Poster N°667)

Presenter: Maria Feola, Scientist III, Manager, Gene Editing

Date/Time: Wednesday October 25th from 17:00 to 18:15 and Thursday October 26th from 20:30 to 21:30

- The robustness and versatility of genome engineering strategies we developed allowed us to gain in-depth insight of TALE-BE editing rules in *cellulo* and further highlighted that the composition surrounding the TC to be edited could strongly impact editing efficiencies. Therefore, educated choice of the TALE-BE architecture and positioning on DNA could either prevent target sequence limitations (increasing targetable sequence space) or decrease, if not eliminate, bystander editing within the editing window, allowing for more precise genome editing outcomes.
- We believe that the knowledge presented will help ensure that genome editing-based strategies are skillfully designed to minimize the risk of potential genotoxic events, overall expanding the potential of TALE-BE for nuclear and mitochondrial therapeutic cell engineering.

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 23 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 "believe", "could", "can" 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, include statements about the potential of the Company's research and pre-clinical programs. 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. 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, 2022 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.

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