UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

January 15, 2015

Via E-mail
Andre Choulika
Chief Executive Officer
Cellectis S.A.
8, rue de la Croix Jarry
75013 Paris, France

Re: Cellectis S.A.
Draft Registration Statement on Form F-1
Submitted December 19, 2014
CIK No. 0001627281

Dear Mr. Choulika:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Summary
Overview, page 1

1. The third sentence in this section states, "[r]ecent unprecedented clinical results indicate that CAR-based immunotherapy is one of the most promising areas of cancer research, and we believe that it represents a new paradigm for cancer treatment." Please expand your disclosure throughout the prospectus to describe the clinical results you are referring to in this statement, including the subject of the trials, who and when they were conducted and why the results are unprecedented.

2. Please briefly describe the novel safety and efficacy attributes that your gene-editing expertise allows you to feature in your product candidates as discussed in the penultimate sentence of the first paragraph of this section.

Our Immuno-oncology Pipeline, page 3

3. Please revise your disclosure in this section to specifically highlight that all of your therapeutic product candidate development programs are still in the discovery or pre-clinical proof-of-concept phase.

Risk Factors
Risks Related to Our Financial Condition and Capital Requirements
We may need to raise additional funding even if this offering is successful…, page 12

4. Please expand your disclosure in this risk factor to quantify the amount of your cash and cash equivalents.

We are limited in our ability to raise additional share capital…, page 13

5. Please revise your risk factor disclosure to identify the level of shareholder approval required at an extraordinary meeting to authorize an increase in the Company's share capital.

Risks Related to the Discovery, Development and Commercialization of Our Therapeutic Product Candidates
Further development and commercialization of our own product candidates…, page 25

6. Please expand your risk factor to disclose under what circumstances Servier and Pfizer may terminate their agreements with you.

Product liability lawsuits could divert our resources, result in substantial…, page 31

7. Please quantify the amount of product liability insurance you carry and whether the amount of your coverage is typical for a company in your industry. Please also provide this information when you discuss any other types of insurance you carry.

Risks Related to Intellectual Property
If we fail to comply with out obligations in the agreements under which we…, page 51

8. Please delete the fourth paragraph of this risk factor as it appears to repeat the same disclosure provided in the first half of the third paragraph.

9. Please identify the licensors which control patent prosecution for your licensed technology.

Risks Related to Our Organization, Structure and Operation
We depend on key personnel and attracting qualified management personnel…, page 53

10. Please identify the key personnel to whom you are referring in this risk factor.

Risks Related to This Offering and Ownership of Our Ordinary Shares and ADSs
As a foreign private issuer, we are permitted to adopt certain home country…, page 63

11. Please ensure that your discussion includes all of the home country corporate governance practices that you intend to follow as disclosed under "Corporate Governance Practices" on page 150.

The rights of shareholders in companies subject to French corporate law differ…, page 65

12. Please include a discussion of how legal fees are or may be borne by shareholders in derivative actions as disclosed under "Shareholder Suits" on page 181.

Use of Proceeds, page 70

13. We note that the first bullet point identifying your use of net proceeds from the offering indicates that you will use proceeds to develop your proprietary immuno-oncology product candidates, including through pre-clinical and clinical trials. Please revise this disclosure to indicate how you intend to prioritize your use of proceeds towards the development of each of your product candidates. In this regard, we note that you identify UCART19 as your most advanced product candidate and that you intend to file a CTA application and commence enrollment of clinical trials for UCART19 in 2015.

14. Please revise your disclosure to indicate how far in the pre-clinical and/or clinical development process you expect the allocated proceeds from this offering will enable you to reach for each of the product candidates you identify.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Overview, page 78

15. You state "In addition to our cash generated by operations, we have funded our operations…" Please revise this disclosure as it does not appear that your operations have generated cash or tell us why you believe no revision is necessary.

Financial Operations Overview
Research and Development Expenses, page 82

16. Please expand your disclosures to include the total external costs incurred during each period presented and to date for each product candidate separately or disclose why you do not provide such disclosure.

Results of Operations
Selling, general and administrative expenses, page 86

17. Please revise your disclosure to quantify the amount of change due to each factor.

Business
Immunotherapy: Turning the Immune System into "Smart Drugs"
Chimeric Antigen Receptor (CARs), page 101

18. Please enlarge your diagram on page 102 so that the text in the diagram is legible.

Nuclease Technology and T-cells: The Design Process
Step 1: Add Genes, such as a CAR, page 107

19. Please describe what you mean by a "viral carrier, or vector" and more specifically your "lentiviral system" as discussed in the first paragraph of this section.

Intellectual Property
Current Intellectual Property Portfolio, page 122

20. Please revise the description of your owned and in-licensed patent rights to discuss your issued patents separately from your patent applications and identify the jurisdictions where your patents have been issued and where your patent applications are pending.

Material Exclusive Licenses Granted to Cellectis, page 124

21. We note that on pages 121-122, you state that you have entered into various agreements regarding your intellectual property; however your disclosure on pages 124-126 only discusses the L'Institut Pasteur, UMN and Ohio State agreements. Please expand your disclosure to also discuss your agreements with Precision Biosciences, Life Technologies Corporation and University College London. In your discussion, please include the material terms of the agreements, including the parties' rights and obligations, the duration of the agreements, termination provisions and any payments required to be made under the agreements, including upfront payments, aggregate milestones and royalties. Also, please file each agreement as an exhibit or provide your analysis as to why an agreement is not required to be filed.

Licenses from Institut Pasteur, page 124

22. Please revise your disclosure regarding your license agreements with L'Institut Pasteur to describe the material terms of the agreements, including whether you were granted an exclusive or non-exclusive license under the second June 2000 agreement and the October 2000 agreement, the upfront payments made under each agreement, aggregate milestones payable under each agreement and royalties payable under each agreement. In regard to the duration of each agreement, where such duration is conditioned on the expiration of the last to expire patent licensed to you, please revise your disclosure to indicate when such patents are expected to expire.

23. We note that under the first June 2000 Pasteur license agreement, exclusivity of such license grant is subject to "certain rights" granted to third parties under the licensed intellectual property. Please expand your disclosure to describe these rights.

License from Regents of the University of Minnesota, page 125

24. Please revise your disclosure regarding your license agreement with UMN to describe the material terms of the agreement, including the upfront license fee paid to UMN, aggregate milestones payable, royalties and the certain patent-related expenses which you are obligated to pay.

License from Ohio State Innovation Foundation, page 125

25. Please revise your disclosure regarding your license agreement with Ohio State to describe the material terms of the agreement, including the upfront license fee paid to Ohio State, aggregate milestones payable and royalties. In regard to the duration of each agreement, where such duration is conditioned on the expiration of the last to expire patent licensed to you, please revise your disclosure to indicate when such patents are expected to expire. Please also file the agreement as an exhibit or provide an analysis as to why it is not required to be filed.

License Agreement from Regents of the University of Minnesota, page 126

26. Please revise your disclosure regarding Cellectis Plan Sciences' license agreement with UMN to describe the material terms of the agreement, including the upfront license fee paid to UMN, royalties, the patent-related expenses which CPS is obligated to pay and the aggregate amount of any milestones payable. In regard to the duration of the agreement, we note that the agreement will continue in effect until no licensed patent is active and until no licensed patent application is pending. Please expand your disclosure to provide the expected expiration date of such patent or patent application. Please also file the agreement as an exhibit or provide an analysis as to why it is not required to be filed.

Compensation of Directors and Executive Officers, page 153

27. With your next amendment, please revise your disclosure concerning the compensation paid to directors and executive officers to reflect information as of the end of your last full financial year on December 31, 2014.

Other Outstanding Securities
Trout Warrant Agreement, page 164

28. Please file the Trout Warrant Agreement as an exhibit.

Enforceability of Civil Liabilities, page 209

29. If you have provided this discussion based upon an opinion of counsel, please name counsel and file a consent to use its name and opinion. Please see Item 101(g)(2) of Regulation S-K.

Statement of Consolidated Operations, page F-4

30. On page 81 you state that operating income consists of revenues and other income. Therefore, please revise your headings in the statements of consolidated operations since 'Operating income' is the heading under 'Total revenue and other income'.

Notes to the Consolidated Financial Statements
Note 3. Summary of significant accounting policies
3.19 Classification of operating expenses, page F-17

31. Please explain to us why expenses associated with obtaining patents are classified as selling, general and administrative expense. Under paragraphs 126 and 127 of IAS 38, which incorporate the guidance in paragraphs 66 and 67 of IAS 38, the costs to register a legal right are considered development costs.

Note 5. Reportable segments, page F-19

32. On page 81 you disclose that you derive substantially all of your revenues from payments pursuant to your collaboration agreements with Pfizer and Servier, patent licensing arrangements, royalties on licensed products or technologies and research and development services. You disclose on page F-20 that revenues from external customers by products and services for fiscal year 2012 and 2013 are given in Note 18. However, Note 18 only discloses total revenue by segment and the amounts disclosed can already be found on page F-20. Therefore, please revise your disclosures to include the amount of revenue separately for each product and service in compliance with paragraph 32 of IFRS 8.

33. Please expand your disclosures about major customers to include the year ended December 31, 2013 rather than only 2012.

General

34. We note that there are a number of additional exhibits that still need to be filed. Please provide these exhibits as promptly as possible. Please note that we may have comments on these materials once they are provided.

35. Please confirm that the graphics included in your registration statement are the only graphics you will use in your prospectus. If those are not the only graphics, please provide any additional graphics prior to their use for our review.

36. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

You may contact Vanessa Robertson at (202) 551-3649 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Johnny Gharib at (202) 551-3170, Bryan Pitko at (202) 551-3203 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ *Bryan J. Pitko* for

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Boris Dolgonos, Esq.
Jones Day