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

DIVISION OF
CORPORATION FINANCE

June 2, 2021

Rachel Haurwitz, Ph.D.
President and Chief Executive Officer
Caribou Biosciences, Inc.
2929 7th Street, Suite 105
Berkeley, California 94710

Re: Caribou Biosciences, Inc.
Draft Registration Statement on Form S-1
Submitted May 7, 2021
CIK No. 0001619856

Dear Dr. Haurwitz:

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.

Draft Registration Statement on Form S-1

Prospectus Summary
Overview, page 1

1. Your statements that your allogeneic CAR-T cell therapies have "best-in-class" potential imply the likelihood of regulatory approval and comparisons to other products and product candidates. The statements are speculative in light of their regulatory status. Please remove the "best-in-class" references.

2. Please make the following changes to your pipeline table:
   - Include all clinical stages that must be completed before commercialization (i.e., add columns for Phases 2 and 3).
   - We note the table entitled "Programs under AbbVie collaboration" with

"undisclosed" targets that are only discussed briefly in your description of your collaboration and license agreement with AbbVie. To the extent these are material programs, disclose the targets and provide descriptions of these programs. Otherwise, please remove them from the table or explain the basis for your belief that they are material and should be included in your pipeline table.

- Please explain what is involved in "lead optimization" and why you believe this is a separate and distinct development phase, as opposed to part of the discovery phases. While we will consider your response, we do not currently believe that the lead optimization is distinct from the discovery phase and should thus be depicted under the discovery column. A textual discussion of the program is likely a more appropriate place to make distinctions regarding different segments within a particular phase.

3. We note your disclosure here and throughout the filing that you are focused on advancing treatments for "clinically validated targets." Please balance these statements throughout your registration statement with the disclosure on page 22 that no products that use novel genome-editing technologies have advanced into clinical trials or received marketing approval in the United States.

4. You note on page 2 and throughout your filing that the February 2021 collaboration with AbbVie is " is an external validation of our chRDNA genome-editing technology." Please revise this statement and similar statements on pages 98 and 116 to remove the "external validation" language, as efficacy determinations are the exclusive purview of the FDA or other regulators.

5. Please balance your disclosure on page 2 and throughout your filing that "CB-010 is currently being evaluated in a phase 1 clinical trial in patients with relapsed or refractory B cell non-Hodgkin lymphoma" with the fact that you have not yet enrolled patients in this trial. We note your disclosure to this effect on page 26.

Risk Factors

Our rights to develop and commercialize our product candidates are subject..., page 57

6. Please provide additional risk factor disclosure about the dispute with Intellia Therapeutics. Specifically, disclose whether your inability to reach a "final resolution" with Intellia would hinder your ongoing Phase 1 trial of CB-010 and whether you would be able to continue clinical development of CB-010 if this dispute is not resolved.

Industry and Market Data, page 88

7. We note your statements regarding market data used in the prospectus, including that the sources of the information do not guarantee the accuracy or completeness of the information and that investors are cautioned "not to give undue weight" to estimates. Please revise these statements to eliminate any implication that investors are not entitled to rely on the information included in your registration statement.

Results of Operations
Licensing and Collaboration Revenue, page 104

8. Please describe and quantify for us revenue by license and collaboration agreement for each period presented that includes reference to related information in Note 4. In addition, clarify whether the "Private Company" is a related party, as referenced on page F-8, or an unaffiliated company, as referenced on page F-21. Revise your disclosure accordingly.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Significant Judgments and Estimates
Stock-Based Compensation Expense, page 112

9. Once you have an estimated offering price range, please explain to us the reasons for any differences between recent valuations of your common stock leading up to the planned offering and the midpoint of your estimated offering price range. This information will facilitate our review of your accounting for stock compensation. Please discuss with the Staff how to submit your response.

Business
Strategic Agreements, page 143

10. Please revise the descriptions of your strategic agreements as appropriate to revise any references to "low-double-digit" and "mid-double-digit" royalties to a royalty range within ten percentage points (for example, between twenty and thirty percent) and to disclose the expected expiry of the last-to-expire patent licensed under the agreements.

11. With respect to the Collaboration and License Agreement with AbbVie, please disclose the fee that AbbVie must pay to expand from two Program Slots and the maximum aggregate commercial milestones you may receive under the agreement.

12. With respect to your Exclusive License Agreement with MSKCC, please revise your disclosure to clarify whether the IPO would trigger a success payment.

13. Please expand your discussion of the ProMab Agreement to disclose the upfront payment, royalty term, and termination provisions.

14. With respect to the Pioneer Agreement, please disclose the "certain events" that permit either party to terminate the agreement.

Intellectual Property, page 147

15. Please expand your intellectual property discussion to disclose the number and type of patents that cover each of your product candidates and programs, whether they are owned or licensed, the related jurisdiction, and the expiration year.

Legal Proceedings
Intellia Arbitration, page 167

16. Please disclose, if known, a general timeframe for when you expect to negotiate economic terms based on the revised scope of the leaseback and whether you believe that agreeing to these terms will resolve the conflict underlying the Intellia Arbitration. If not, please expand your disclosure to discuss how the interim award determining that the two patent families are included in the Intellia License Agreement impacts any licenses or sublicenses that you have granted, if at all.

Licensing Agreement Transaction, page 193

17. You disclose that you have a license agreement with a "private company" controlled by Anterra that provides for milestone payments and royalty payments for future sales of licensed products. Please disclose the material terms of the license agreement, including the milestone payments and the royalty range, and file the agreement as an exhibit or tell us why you believe such filing is not required. Refer to Item 601(b)(10) of Regulation S-K.

Principal Stockholders, page 197

18. Please identify in footnotes to the table all natural persons who have voting and/or investment power over the shares held by F-Prime Capital Partners.

Financial Statements
Note 2. Summary of Significant Accounting Policies
Revenues, page F-9

19. Please expand your disclosures to describe the nature of your performance obligation associated with maintenance fees and when you satisfy your performance obligation. In this regard, while you disclose herein that you recognize revenues associated with annual maintenance fees on a point in time basis on each anniversary date, you also disclose on page F-23 that your deferred revenue primarily results from customer payments received upfront for maintenance fees because these performance obligations are satisfied over time. Please address this apparent discrepancy. Refer to your disclosure on page 111 as well.

General

20. 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.

You may contact Franklin Wyman at 202-551-3660 or Jeanne Baker at 202-551-3691 if you have questions regarding comments on the financial statements and related matters. Please contact Dillon Hagius at 202-551-7967 or Irene Paik at 202-551-6553 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Ashok Mukhey