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

DIVISION OF
CORPORATION FINANCE

July 29, 2021

J. Kevin Judice, Ph.D.
Chief Executive Officer
DiCE Molecules Holdings, LLC
279 E. Grand Avenue, Suite 300, Lobby B
South San Francisco, CA 94080

Re: DiCE Molecules Holdings, LLC
Draft Registration Statement on Form S-1
Submitted July 2, 2021
CIK No. 0001645569

Dear Dr. Judice:

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

Overview, page 1

1. Please revise your pipeline table to combine the lead optimization column with the research column. A textual discussion of the program is a more appropriate place to make distinctions regarding different segments within a particular phase. Please also remove the portion of the table entitled "Discovery Programs", as these additional targets do not appear material to the company at this time.

2. Please remove the statement on page 2 comparing S011806's potency to that of COSENTYX as it is not appropriate disclosure for the Summary where full and proper context is not provided.

Prospectus Summary, page 1

3. We note several comparisons to certain approved therapies in the Summary and in the Business section. If you have not conducted head-to-head trials, please revise your disclosure to clearly state this fact and disclose why you believe these comparisons are appropriate. If you provide disclosure regarding results from other trials, expand your disclosure to provide the other information regarding these trials that would help an investor make a meaningful comparison and understand the supporting trials and any limitations and qualifications associated with such trials (e.g., number of patients and whether any patients dropped out of the trial or were otherwise excluded and the reasons, patient population, dosage, how the baseline was measured in each study, the phase of the trial, serious adverse events, etc.).

Our Oral Therapeutic Candidates Targeting IL-17 for Immunology Indications, page 4

4. We note your disclosure in this section that you intend to advance two candidates into IND-enabling studies and to "rapidly" progress another candidate into clinical trials. We also note your disclosure on page 6 and in the Business section that you intend to rapidly advance S011806 through clinical development, rapidly advance your selective a4ß7 and aVßX integrin antagonists into the clinic and rapidly advance other potential product candidates. Please revise this disclosure to remove any implication that you will be successful in advancing your product candidates in a rapid or accelerated manner as such statements are speculative.

Our Team and Investors, page 6

5. We note that you identify certain entities as investors in your company here and on page 120. However, certain of these entities do not appear to be among your principal stockholders as disclosed on page 171. If material, please expand your disclosure to describe the nature of each such entity's investment in you and explain to us why including this information is appropriate. Please also explain in the response your plans to update investors about any changes these entities make with respect to their investments in your company.

Market and Industry Data, page 90

6. We note your statement that industry publications and other reports that you have obtained from independent third parties generally state that the data contained in these publications or other reports have been obtained in good faith or from sources considered to be reliable, but they do not guarantee the accuracy or completeness of such data. You also caution potential investors not to give "undue weight" to such estimates or projections. These statements appear to imply a disclaimer of responsibility for this information in the registration statement. Please either revise this section to remove such implication or specifically state that you are liable for all information in the registration statement.

Business, page 114

7. We note statements in this section regarding the performance of your product candidates. For example, we note statements that you have shown comparable potency of S011806 to that of COSENTYX, that the selectivity profile demonstrated by S011806 is generally consistent with COSENTYX and TALTZ, that you anticipate observing potential clinical activity within two to four weeks following the initial dosing of S011806 based on the reported onset of clinical efficacy of COSENTYX, and similar statements. Please revise all performance claims so that the basis for each statement is clear. Safety and efficacy determinations are the exclusive authority of the FDA or comparable foreign regulators. You may provide a summary of the data that you used to draw these conclusions, but not the conclusions or predictions that the product candidates are or will be safe or effective.

Sanofi License and Collaboration Agreement, page 139

8. Please revise your disclosure regarding the tiered royalties to be received by the company under the Sanofi license agreement to discuss how the royalty rate will be determined in each instance.

Intellectual Property, page 140

9. With respect to the patent applications for your IL-17 program, please revise to disclose the type of patent protection such as composition of matter, use or process.

Principal Stockholders, page 170

10. Please revise your disclosure to identify the natural person or persons who have voting and investment control of the shares held by the entities affiliated with Sands Capital Private Growth.

Description of Capital Stock, page 172

11. We note that you refer shareholders to, in part, the applicable provisions of the Delaware law. It is not appropriate to qualify your disclosure by reference to information that is not included in the filing or filed as an exhibit. Please revise accordingly.

General

12. 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 Gary Newberry at 202-551-3761 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Ada D. Sarmento at 202-551-3798 or Laura Crotty at 202-551-7614 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Robert A. Freedman, Esq.