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

DIVISION OF
CORPORATION FINANCE

June 10, 2020

Eric A. Adams
President and Chief Executive Officer
InMed Pharmaceuticals Inc.
Suite 310-815 W. Hastings Street
Vancouver, B.C. V6C 1B4
Canada

Re: InMed Pharmaceuticals Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted May 27, 2020
CIK No. 0001728328

Dear Mr. Adams:

We have reviewed your amended 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.

Amendment No. 1 to Draft Registration Statement on Form S-1 submitted May 27, 2020

Prospectus Summary
Overview, page 2

1. We note your response to comment 2. The prospectus summary should provide a brief, but balanced, description of the key aspects of your business. Please balance your statement that your approach leverages the history of health benefits attributed to the cannabis plant with disclosure in this "Overview" section that the U.S. Food and Drug Administration (FDA) has, to date, not approved any marketing application for cannabis for the treatment of any disease or condition and has approved only one cannabis-derived and three cannabis-related drug products. Additionally, we note your response to comment

3, which we reissue. Please provide a discussion of the risks and challenges you face in implementing your business plan that is dependent on your biosynthesis-based manufacturing system, e.g. the need to scale up manufacturing capacity from current limited levels, as discussed on page 42.

INM-755 in Dermatology, page 4

2. We note your response to comment 8 and your revised disclosure stating that "[a]s assessed by the Netherlands National Competent Authority and Ethics Committee, the findings from our toxicology studies supported the safety of CBN for Phase I clinical development studies in healthy volunteers." Safety is assessed throughout all phases of clinical trials. As your product candidates have not completed clinical trials, your product candidates have not been determined to be safe. Therefore, it is inappropriate to state or imply that your product candidates will be determined to be safe. Please revise your disclosure to remove such implication here and throughout your registration statement. We will not object to statements that your product candidate was well-tolerated. Additionally, please revise your disclosure to clarify, if true, that the disclosure in the third paragraph of this section relates to your Phase 1 study (755-101-HV) discussed in the paragraph above.

Business
Our Product Candidates and Technologies
Key Milestones, page 78

3. We note your response to comment 12. Please further revise your description of the Collaborative Research Agreements and Technology Assignment Agreements with the University of British Columbia to disclose the termination provisions and the term of your royalty obligations, respectively.

INM-088 for the Treatment of Glaucoma, page 100

4. We note your response to comment 16. Please revise your characterization of the INM-088 preclinical trials to discuss the actual data from the preclinical trials, rather than drawing conclusions from the results. As illustrative examples only, we note the following disclosures:

- CBN has a significant anti-apoptotic effect on differentiated RGCs when subjected to elevated hydrostatic pressure.....Exposure of these cells under the same conditions concurrently with CBN prevented apoptosis and resulted in a significantly higher level of cell survival.
- reduction in IOP and improvement of pERG amplitudes were used to demonstrate effectiveness of CBN as a potential glaucoma treatment.

Intellectual Property , page 110

5. We note your response to comment 17. Please revise to identify the material jurisdictions where patent applications are pending. Please also provide estimated expiry dates if the applications are approved.

You may contact Ibolya Ignat at 202-551-3636 or Terence O'Brien at 202-551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Jeffrey Gabor at 202-551-2544 or Christine Westbrook at 202-551-5019 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Daniel M. Miller, Esq.