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

DIVISION OF
CORPORATION FINANCE

May 11, 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.
Draft Registration Statement on Form S-1
Submitted April 13, 2020
CIK No. 0001728328

Dear Mr. Adams:

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 submitted April 13, 2020

Cover page

1. We note your disclosure that you have applied to list your common shares on the Nasdaq Capital Market and on page 12 that there can be no assurance that Nasdaq will approve your listing application. Please clarify whether the offering is contingent upon receiving Nasdaq listing approval, and if it is not, please revise your disclosure to clarify this fact.

Prospectus Summary
Overview, page 2

2. We note your disclosure that your approach leverages on the history of health benefits attributed to the cannabis plant and applies tried, tested and true pharmaceutical drug development discipline to establish individual cannabinoid compounds as clinically-proven, FDA-approved medicines. Please place your disclosure in appropriate context by disclosing 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, please revise your disclosure to remove any implication that you are presently successful or are likely to be successful in securing marketing approval for any of your product candidates. Please make similar revisions to your statement on page 6 that you have the internal capabilities to design and execute, together with multiple external vendors, the preclinical data sets and clinical studies required to advance pharmaceutical drugs towards FDA approval and, ultimately, commercialization.

3. We note your disclosure that you are developing a proprietary biosynthesis manufacturing technology to facilitate access to rare cannabinoids that are otherwise not available at commercial scale and low cost. Please balance this disclosure with a discussion of the risks and challenges you face in manufacturing pharmaceutical-grade cannabinoids, such as the need to scale up manufacturing capacity from current limited levels, as discussed on page 42.

4. We refer to your development programs table on pages 3 and 67. You may describe the results of preclinical studies in your narrative disclosure with full and proper context with respect to the objective observations of such studies; however, it is inappropriate to present preclinical studies as establishing proof-of-concept for your product candidates. Please remove this text from the table. We also note your inclusion of “Additional Uses of Rare Cannabinoids." Please revise your table to identify the specific product candidates and indications. If you have not yet identified specific product candidates or the indications which they will treat, please remove reference to such programs from your table as such information is premature for inclusion in your Summary presentation. Similarly, please revise your table to identify dermatology indication #2 and ocular indication #2.

5. We refer to your development programs table on pages 3 and 67. Please include a column for each of Phase 1, Phase 2 and Phase 3. Additionally, please revise your clinical development table on pg. 95 to make it clear that you will need to complete Phase 3 clinical trials.

6. We note your statement on page 3 that you have "no relationship with the Cannabis plant." However, your risk factor disclosure on page 28 indicates that your product candidates contain substances related to the Cannabis plant and may therefore be classified as “controlled substances” and that their regulatory approval may generate public controversy. Please reconcile your disclosure.

7. We note your statements on pages 4 and 69 that "THC and CBD have established therapeutic benefits in certain instances." Given that it is within the sole authority of the FDA or similar foreign regulator to determine the efficacy of a drug and that efficacy is determined by reference to the indication being treated, the statement THC and CBD have established therapeutic benefits in certain instances is not appropriate. Please delete these statements. You may replace these statements with a description of a publicly available clinical trial conducted to assess efficacy and the resulting data. The accompanying disclosures should identify the party performing the trial and include the number of participants and dosing information but should not draw conclusions about efficacy from the data. Additionally, we note your disclosure that you have completed more than 30 pharmacology and toxicology studies to investigate the effects of CBN. Please place this selected disclosure in its proper context by revising your Summary disclosure to make it clear that your clinical data to date is limited to a small number of healthy subjects.

INM-755 in Dermatology, page 4

8. We note your statement that findings from several toxicology studies support the safety of CBN for continued clinical development. As safety is a determination that is solely within the authority of the FDA and comparable foreign regulators and is assessed throughout all phases of clinical trials, 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, e.g., on page 74 where you state CBN has demonstrated several compelling pharmacological, toxicological and commercial features, including unique safety properties.

Regulatory and Patent Strategy, page 5

9. Please expand this discussion to explain how this strategy differentiates you from competitors.

Risks Related to our Business, page 8

10. Please expand the bullet point on the top of page 8 to highlight the risks related to the current status of your patent portfolio.

Use of Proceeds, page 47

11. Please revise the discussion to identify the stage of development you expect to achieve with the proceeds of the offering for INM-755 and INM-088. To the extent you expect to begin a particular stage of development but do not expect to complete it, please indicate

that you will need to raise additional funding to complete that stage of development.

Business

Our Product Candidates and Technologies

Key Milestones, page 78

12. We note your disclosure on page 78 that you have entered into various agreements with University of British Columbia. In your Business section, please include a description of the material terms of the agreements, including rights and obligations, financial terms including amounts paid to date, aggregate milestone amounts to be paid or received, the royalty range and term, as applicable, term and termination provisions. With regard to the royalty range, please disclose a royalty range of not more than 10 percentage points.

Research and Development Pipeline of Therapeutic Drug Candidates

INM-755 for the Treatment of EB, page 80

13. We note your statements that "[i]t is well documented that phytocannabinoids, or plant-derived cannabinoid compounds, have unique anti-inflammatory, analgesic and wound healing promoting properties via several mechanisms" and that your "preclinical research has identified a specific cannabinoid, CBN, that may prove beneficial to patients." These statements imply efficacy and are presented as a conclusion. Please remove these and similar statements throughout the registration statement. Revise your disclosure to present balanced data from your trials stating the actual results observed and quantifying the results as necessary.

14. We note that CBN was studied in a panel of cannabinoids to determine its ability to regulate keratin expression and that CBN induced a "statistically significant" upregulation of K15 in 2 of the 3 experiments. Please indicate the p-value by which you measured statistical significance and explain how p-value is used to measure statistical significance. Please also revise to state whether the results observed in the other preclinical studies presented in the section were statistically significant.

Summary of Contemplated Clinical Development Plans, page 94

15. We note that all subjects in this first clinical trial completed treatment and evaluations by March 27, 2020. For each your completed and contemplated clinical trials, please disclose the scope and size; dosage and duration; and if applicable, the actual results observed.

INM-088 for the Treatment of Glaucoma, page 98

16. We note that the preclinical trials discussed in this section provide results without providing proper context for such results. For each of the preclinical trials discussed in this section, please disclose the scope and size; dosage and duration; and actual results observed.

Intellectual Property, page 107

17. As to your material patents, clarify whether you directly own or license the patents and patent applications. If licensed from a third party, please identify the third party. Additionally, for each material patent, please identify all applicable jurisdictions where patents are granted or patent applications are pending, disclose the scope of patent of protection (e.g., composition of matter, use, or process) and patent expiry.

Material United States Federal Income Tax Considerations, page 138

18. Please revise to clearly state that the disclosure in this section is the opinion of the respective counsels, and revise to remove language stating that "generally" certain tax consequences will apply and express a firm opinion for each material tax consequence or explain why such an opinion cannot be given.

General

19. 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 our 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 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.