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

DIVISION OF
CORPORATION FINANCE

October 3, 2022

Christian Kopfli, Esq.
Chief Executive Officer
Chromocell Therapeutics Corporation
675 US Highway Route 1 South
North Brunswick, NJ 08906

Re: Chromocell Therapeutics Corporation
Draft Registration Statement on Form S-1
Submitted September 6, 2022
CIK No. 0001919246

Dear Christian Kopfli:

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 September 6, 2022

Prospectus Summary
Our Business
Overview, page 1

1. You make several assertions regarding the safety of your lead candidate, CC8464, including your statement that CC8464 has "demonstrated a good safety and tolerability profile in Phase 1 clinical trials" and "[CC8464] demonstrated safety in a Phase 1 study." Safety is a determination that is within the authority of the FDA. Please revise or remove these statements and similar statements throughout your prospectus. Note that you may state your product candidate has been well tolerated, if accurate. In addition, please

update your disclosure here to disclose your "Phase 1 clinical trials have shown that CC8464 can lead to rashes," consistent with your risk factor disclosure on page 15.

2. You state that "[a]ccording to Mordor Intelligence, the global pain management market was valued at approximately $67 billion in 2021, and it is expected to have revenues of $89 billion in 2027, with a CAGR of 4.65% over the forecast period." However, you state elsewhere that you "are currently focusing [y]our research and product development efforts on CC8464 for the management of EM." Please balance your disclosure to discuss the current size of the market for pain management in EM patients and make it clear that you do not currently have product candidates that address the broad pain management market at this time or otherwise advise.

3. You state on page 52 that your "development programs are initially designed to address pain and pain-related symptoms in EM." However, on page 53 you state that CC8464 is your lead candidate for the treatment of EM. Please revise this section to include such information in the prospectus summary and clarify throughout your prospectus whether your product candidate is designed to treat EM or whether it is designed to treat only the pain-related symptoms in EM or otherwise advise.

4. We note your references here and throughout your prospectus to third party research, including Mordor Intelligence and Transparency Market Research. Please clarify whether you commissioned research from Mordor Intelligence, Transparency Market Research or any other third party research referenced in your prospectus. If so, please revise your filing to identify such third party and file a consent from such third party. Please refer to Securities Act Rule 436 and Question 233.02 of the Securities Act Rules Compliance and Disclosure Interpretations.

Risks Related to Development, Clinical Testing, and Regulatory Approval, page 12

5. We note your disclosure throughout this section where you disclose "[y]our pipeline of products" and "[y]our other lead candidates." However, your disclosure on page 55 appears to indicate that you currently only have one product candidate, CC8464, and that you "plan to allocate future resources towards the discovery and development of other compounds that could potentially modulate NaV1.7 or related sodium-channels." Please update your disclosure here and throughout your prospectus to clarify that your current pipeline consists of one clinical candidate, CC8464, or otherwise advise.

FDA designations to expedite drug development and review, including orphan drug designation, Breakthrough Therapy designation..., page 18

6. We note your disclosure on page 55 that you "are considering submitting a request to the FDA for Orphan Drug Designation" for CC8464. Please update your risk factor to clarify that you have not submitted an application to date or otherwise advise.

Our certificate of incorporation and our bylaws provide that the Court of Chancery of the State of Delaware will be the exclusive forum..., page 34

7. We note your disclosure here that "the exclusive forum provision does not apply to suits brought to enforce any liability or duty created by the Securities Act, the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or any other claim for which the federal courts have exclusive jurisdiction." However, we also note your disclosure that "[u]nless [you] consent in writing to the selection of an alternative forum, the United States federal district courts shall, to the fullest extent permitted by applicable law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act," which appears to indicate that the exclusive forum provision would apply to causes of action arising under the Securities Act. Please update your disclosure to clarify whether this provision applies to actions arising under the Securities Act. In that regard, we note that Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. If the provision applies to Securities Act claims, please also revise your prospectus to state that there is uncertainty as to whether a court would enforce such provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Please make corresponding changes to your Choice of Forum disclosure on page 89.

Use of Proceeds, page 42

8. We note your disclosure on page 49 that "[y]our primary use of cash is to repay assumed liabilities associated with the execution of the Contribution Agreement on July 12, 2022." Please update your disclosure here to more clearly describe the assumed liabilities that will be repaid with the net proceeds or otherwise advise. Please refere to Item 504 of Regulation S-K and Instruction 4 thereto.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Results of Operations, Comparison of the Fiscal Years Ended December 31, 2021 and 2020
Research and Development Expenses, page 48

9. Please revise to provide quantitative and/or qualitative disclosure for all periods presented that provides more transparency as to the type of research and development expenses incurred (i.e. by nature or type of expense) which should reconcile to total research and development expense on the Consolidated Statements of Operations. For example, your disclosure should elaborate on the nature of consulting expense and lab materials, as disclosed on page F-9.

Business
Overview, page 52

10. We note your disclosure on page 53 that you plan to begin Phase 2a trial in 2023 and believe it will provide guidance for other indications of peripheral neuropathic pain. Expand this section or where you deem appropriate in your Business section, to include a description of your planned Phase 2a trial.

Our Strategy, page 52

11. Please define the acronym EM at first use. In addition, we note your statement that "[b]ased on genetic studies, a scientific consensus emerged that NaV1.7 could be critical in mediating pain in EM." Please describe the genetic studies, and revise your disclosure to provide your basis for this statement.

12. We note your disclosure here that "[b]ased on [CC8464's] pre-clinical profile ...CC8464 has the potential to become a first-in-class drug for treatment of EM patients." Please expand this section or where you deem appropriate in your Business section to discuss the "pre-clinical profile" of CC8464, including a discussion of the objective results of any preclinical studies preformed to date.

13. We note your disclosure where you state that your focus is to address pain and pain-related symptoms in EM. However, on page 54, you disclose that there are two types of EM, primary and secondary EM, and further state that there is also EM cases where a known genetic variation caused the illness and cases where it is unknow. Please clarify whether CC8464 is intended to target all types of EM or otherwise advise.

14. We note your disclosure here that "CC8464 has the potential to become a first-in-class drug for treatment of EM patients." Please remove references throughout your prospectus to potential "first-in-class" when describing your product candidate as these descriptions imply an expectation of regulatory approval and are inappropriate given the length of time and uncertainty with respect to securing marketing approval.

CC8464 Current Study Results, page 54

15. We note you have completed a Phase 1 clinical trial for CC8464. Please expand your description of this trial to provide specific details, parameters and results of the trial, including, for example only:
    - dates of the trial and location;
    - identity of trial sponsor(s);
    - trial design;
    - patient information (e.g., number of patients enrolled and treated and the criteria for participation in the study);
    - duration of treatment and dosage information;
    - primary and secondary endpoints; and
    - discussion of results, including adverse events and serious adverse events, if any.

In addition, please revise to clarify whether the Phase 1 trial was powered for statistical significance. If the Phase 1 trial was powered for statistical significance please provide p-values for the results of the trial.

16. You state that "[a] does-escalation-regime is a standard method to mitigate rashes as a side effect and the FDA has approved drugs with such prescriptions." Please revise your disclosure to eliminate any suggestion that CC8464 is likely to be approved. Safety and efficacy determinations are solely within the authority of the FDA or comparable foreign regulators. Please revise further to clarify that although the FDA has approved prior drugs with similar side effects there is no guarantee that CC8464 may be approved with such side effects.

CC8464's Mechanisms of Action, page 54

17. We note your disclosure that "mutations of NaV1.7 are a leading cause for EM." However, you do not appear to describe CC8464's mechanisms of action in this section as the subheading appears to indicate. Please expand your discussion here to explain the potential mechanism of action of CC8464 for treatment of EM and the basis for this claim or otherwise advise.

CC8464 Manufacturing, page 55

18. We note you have rights to two proprietary methods to produce CC8464. Please revise your disclosure to discuss your manufacturing process in more detail, including describing both methods in greater detail and state how you have proprietary right i.e. patent protection, trade secret, etc. or otherwise advise.

19. We note you plan to use CROs to manufacture CC8464 in the future. Please discuss your current manufacturing process for the CC8464 used in your clinical trials and state whether it has been conducted in-house or outsourced from a third-party. In addition, please update your disclosure to discuss if you currently have enough supply of CC8464 to begin your anticipated Phase 2a study or otherwise advise.

Intellectual Property, page 55

20. You state that you have received a patent from USPTO for the composition and use of CC8464. Please expand your disclosure to clearly state if patent is owned or licensed and disclose the expected expiration date. Please also disclose such information for the pending patent applications referenced on page 56, including type of patent protection (for example, composition of matter, use or process), the specific product(s) to which the patent relates, whether the patent is owned or licensed, the patent expiration dates, and the applicable jurisdictions.

Our Competition, page 56

21. We note your disclosure that "[t]he market exclusivity associated with Orphan Designation plus the CC8464 market exclusivity associated with [y]our patent and pending patent applications are key elements of [y]our commercialization strategy." Please balance such statement by indicating that you currently do not have and may not receive Orphan Designation by the FDA.

22. We note your disclosure here that "the advanced clinical development of CC8464, if approved by the FDA, provides a viable pathway to realize [y]our commercialization plans." Given your current stage of development, please provide your basis for you statement that the clinical development of CC8464 is "advanced" or otherwise advise.

Management, page 75

23. We note several of your executive and director biographies where the principal occupation and employment is unclear during the past five years. Please discuss the principal occupation and employment for the past five years, including the name and principal business of any corporation or other organization. Please also indicate any other directorships held during the last five years for each director. See Item 401 of Regulation S-K.

24. You state that Christian Kopfli, Esq. has served as CEO and as a director since your inception. You also state that he is currently CEO of Chromocell Holdings. Please state whether Christian Kopfli will be working as CEO for Chromocell Therapeutics Corporation on a non-full time basis. If so, please revise your discussion to include appropriate risk factors.

General

25. We note that pursuant to your contribution agreement Chromocell Corporation contributed all assets, liabilities, and results of operations relating to Chromocell Holdings' therapeutic business. We further note that in 2015 Chromocell Corporation entered into a license and collaboration agreement with Astellas Pharma Inc whereby Astellas obtained worldwide rights to commercialize CC8464. With reference to Regulation S-K, Item 601, please update your exhibit index to include all required exhibits, including all your material contracts such as your collaboration agreement with Astellas Pharma Inc., and any other material agreements, or tell us why you believe such filing is not required. In addition, please disclose the material terms of the collaboration agreement.

26. Please provide us with supplemental 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, have presented or expect to present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not you retained, or intend to retain, copies of those communications.

You may contact Kristin Lochhead at 202-551-3664 or Daniel Gordon at 202-551-3486 if you have questions regarding comments on the financial statements and related matters. Please contact Doris Stacey Gama at 202-551-3188 or Jason Drory at 202-551-8342 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: David Danovitch, Esq.