

January 8, 2024

Timothy Cunningham
Chief Financial Officer
Bionomics Limited
200 Greenhill Road
Eastwood SA 5063
Australia

Fiscal Year Ended June 30, 2023
2023

Re: Bionomics Limited
Form 20-F for the
Filed October 18,
File No. 001-41157

Dear Timothy Cunningham:

We have limited our review of your filing to the financial statements and related disclosures and have the following comments.

Please respond to this letter within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this letter, we may have additional comments.

Form 20-F for the Fiscal Year Ended June 30, 2023

Item 5. Operating and Financial Review and Prospects
A. Operating Results
Results of Operations
Research and Development Expenses , page 109

1. You disclose on page 107 that substantially all of your direct research and development expenses in the years ended June 30, 2023 and 2022 were on BNC210 and consisted primarily of external costs. Please revise your future filings to address the following to more clearly address the trends experienced during the periods presented:

out the costs incurred during each period presented for the PTSD ATTUNE clinical trial and the SAD PREVAIL clinical trial separately. If you do not track your research and development costs by indication, please disclose that fact and separately quantify the total amount of external costs recognized related to BNC210 for each period presented.

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For all other research and development expenses, provide other quantitative or qualitative disclosure that provides more transparency as to the type of research and development expenses incurred (i.e. quantify by nature or type of expense). The total of costs broken out should reconcile to total research and development expense on the Statements of Operations.

Item 15. Controls and Procedures
Management's Annual Report on Internal Control over Financial Reporting, page 147

2. We note your disclosure that this Annual Report does not include a

report of management's assessment regarding internal control over financial reporting due to a transition period established by rules of the SEC for newly public companies. Since this is your second 20-F, these transition rules no longer apply. Please amend your filing to include management's assessment of internal control and revise your Exhibit 12 certifications accordingly. Refer to Item 15 of Form 20-F, specifically the instructions to Item 15.1.

In closing, we remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Vanessa Robertson at 202-551-3649 or Daniel Gordon at 202-551-3486 with any questions.

FirstName LastName Timothy Cunningham
Company Name Bionomics Limited
Corporation Finance
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Sciences
FirstName LastName

Sincerely,
Division of
Office of Life