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

DIVISION OF
CORPORATION FINANCE

November 12, 2021

Errol De Souza
Executive Chairman
Bionomics Limited/FI
200 Greenhill Road
Eastwood SA 5063
Australia

Re: Bionomics Limited/ FI
Amendment No. 1 to
Draft Registration Statement on Form F-1
Submitted October 28, 2021
CIK No. 0001191070

Dear Mr. Souza:

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 Form F-1 filed October 28, 2021

BNC201, page 2

1. We note your revisions in response to our prior comment 2 and reissue in part. Please include in your summary risk factors on page 4 the risk related to federal and state regulation of your combination of BNC210 and EMP-01 as a controlled substance.

Our Portfolio, page 2

2. We note your response to prior comment 4. Please delete references to the undisclosed programs. Since these programs are in clinical development, they should be disclosed.

a7 Receptor PAM Program with Merck, page 3

3. We note your response to our prior comment 7 and reissue in part. Please disclose that you will not receive any royalty payments from Merck as a result of the contingent value right to be issued for the sole benefit of your existing shareholders. Please also explain the extent to which you control the clinical development process, whether you have access to information related to clinical trial results, serious adverse events and ongoing communications with the FDA relating to these programs or the extent to which Merck is required to provide you with this information.

Potential Advantages of BNC210 for the Treatment of Anxiety and Stressor-Related Disorders, page 114

4. We note your response to our prior comment 16 and reissue. Dividing the previous table into two separate tables does not resolve the implied expectation of regulatory approval, which is still inappropriate given the early stage of BNC210's development. Please remove the tables on page 115.

Legacy Oncology Programs, page 125

5. We note your response to our prior comment 12 and reissue in part. Please revise the below statements to disclose your objective observations from the trials without concluding that the product candidate was effective or had an impact on the observed results. Any conclusions regarding efficacy are within the sole authority of the FDA. For example, we would not object to a statement such as "In preclinical studies, BNC101 was associated with a reduction in the frequency of cancer stem cells..."

    - On page 125, "Representative molecules from each series have been observed to reverse pharmacologically induced cognitive deficits in mouse and rat models with equivalent activity to risperidone, an antipsychotic drug used to treat schizophrenia, used as the positive control."
    - On page 125, "In preclinical studies, BNC101 targeted and reduced the frequency of cancer stem cells derived from primary patient colorectal tumors both *in vitro* and *in vivo*."

6. We note your response to our prior comment 13. To the extent the product candidate relating to your memorandum of understanding with EmpathBio is material, the memorandum supporting the development of this product candidate is material and should be fully described and filed as an exhibit pursuant to Item 601(b)(10) of Regulation S-K, or provide an analysis as to why you do not believe filing is required. If you do not consider the agreement material, please remove the collaboration from the table.

You may contact Christie Wong at 202-551-3684 or Kevin Vaughn at 202-551-3494 if you have questions regarding comments on the financial statements and related matters. Please

contact Jordan Nimitz at 202-551-5831 or Christopher Edwards at 202-551-6761 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Nathan Ajiashvili, Esq.