

January 11, 2024

United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549

Attn: Vanessa Robertson, Office of Life Sciences

RE: Bionomics Limited Form 20-F for the Fiscal Year Ended June 30, 2023 Filed October 18, 2023 File No. 001-41157

Dear Ms. Robertson:

Set forth below are the responses of Bionomics Limited (the "<u>Company</u>," "<u>we</u>," "<u>us</u>" or "<u>our</u>") to comments received from the staff of the Division of Corporation Finance, Office of Life Sciences (the "<u>Staff</u>") of the Securities and Exchange Commission (the "<u>Commission</u>") by letter dated January 8, 2024, with respect to the Company's annual report on Form 20-F filed with the Commission on October 18, 2023 (the "<u>Annual Report</u>").

Concurrently with the submission of this letter, we have filed through EDGAR Amendment No. 1 to the Annual Report (the "<u>Amendment No. 1</u>"), each as a "correspondence" filing for the Staff's review and approval prior to final submission of the latter on EDGAR.

For your convenience, each response below is prefaced by the exact text of the Staff's corresponding comment in bold text. All references to page numbers and captions correspond to Amendment No. 1, unless otherwise indicated.

1. 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

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:

• Revise to break out the costs incurred during each period presented for the PTSD ATTUNE clinical trial and the SAD PREVAIL clinical trial separately.

Bionomics Limited ABN 53 075 582 740 200 Greenhill Road Eastwood SA Australia 5063 Phone 61 8 8150 7400 Email info@bionomics.com.au website www.bionomics.com.au

- 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.
- 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.

Response to Comment No. 1

As requested by the Staff, in our future annual reports, and such other filings where required, we will revise such future filings to address the Staff's comments above, including those related to the identified costs and, where applicable, any trends experienced during the periods presented.

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

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.

Response to Comment No. 2

We have revised our Item 15 disclosure as requested by the Staff to include management's assessment of internal controls over financial reporting as set forth below (in track changes format for the Staff's convenience). We have also revised (also in track changes) and annexed hereto Exhibits 12.1 and 12.2, respectively, to Amendment No. 1 in response to the Staff's corresponding comment.

"Item 15. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Exchange Act")) that are designed to ensure that information required to be disclosed in ours reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer, Non-Executive Chairman, and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Our management, with the participation of our Chief Executive Officer, Non-Executive Officer, Non-Executive Officer, Non-Executive Officer, Our management, with the participation of our Chief Executive Officer, Non-Executive Officer, Non-Executive Chairman and Chief Financial

Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of June 30, 2023. Based upon that evaluation, our Chief Executive Officer, Non-Executive Chairman and Chief Financial Officer concluded that, as of June 30, 2023, our disclosure controls and procedures were effective to accomplish their objectives at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer, Non-Executive Chairman and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of June 30, 2023, based on the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013). Based on our evaluation under the criteria set forth in Internal Control — Integrated Framework, our management concluded that our internal control over financial reporting was effective as of June 30, 2023.

This Annual Report does not include an attestation report of the Company's registered public accounting firm as we are an emerging growth company. This Annual Report does not include a report of management's assessment regarding internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Aet) due to a transition period established by rules of the SEC for newly public companies. This Annual Report also does not include an attestation report of our independent registered public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm due to a transition period established by rules of the SEC for newly public accounting firm will not be required to opine on the effectiveness of our internal control over financial reporting until we are no longer an emerging growth company.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) that occurred during the period covered by this Annual Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting."

If you have any questions with respect to the foregoing responses or require further information, please contact the undersigned at (781) 439-5551 or Theodore J. Ghorra, Esq. of Rimon P.C. at (646) 717-3735.

Very truly yours, BIONOMICS LIMITED

By: /s/ Timothy Cunningham

Name:Timothy CunninghamTitle:Chief Financial Officer

cc: Daniel Gordon (Securities and Exchange Commission) Spyros Papapetropoulos, Bionomics Limited, CEO Andrew Reilly, Esq. (Rimon P.C.)

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

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Form 20-F/A

(Amendment No. 1)

(Mark One)

□ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended June 30, 2023

OR

□ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

□ SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report For the transition period from _____ to Commission file number 001-41157

BIONOMICS LIMITED

(Exact name of Registrant as specified in its charter)

Not Applicable (Translation of Registrant's name into English)

Australia (Jurisdiction of incorporation or organization)

200 Greenhill Road Eastwood SA 5063 Australia

(Address of principal executive offices)

Spyridon "Spyros" Papapetropoulos, M.D. President and Chief Executive Officer Email: spyros@bionomics.com.au Telephone: +61 8 881507400 2710 Gateway Oaks Drive, Suite 150N

Sacramento, CA 95833

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered, pursuant to Section 12(b) of the Act:

	Trading Symbol(s)	Name of each exchange on which
Title of each class		registered
American Depository Shares, each representing the right to		
receive one hundred eighty (180) Ordinary Shares, no par	BNOX	The Nasdaq Global Market
value per share		

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

Indicate the number of outstanding shares of each of the issuer's classes of capital stock or common stock as of the close of business covered by the annual report. 1,486,735,424 ordinary shares.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes \Box No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes \Box No \boxtimes

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes \boxtimes No \square

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes \boxtimes No \square

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

 $\Box \text{ Large accelerated filer} \qquad \Box \text{ Accelerated filer} \qquad \boxtimes \text{ Non-accelerated filer} \qquad \boxtimes \text{ Emerging growth company}$

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition

period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. \Box

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. \Box

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. \Box

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentivebased compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to \$240.10D-1(b). \Box

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

 \Box U.S. GAAP \boxtimes International Financial Reporting Standards as issued by the International Accounting \Box Other Standards Board

If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow. Item 17 \Box Item 18 \Box

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes \Box No \boxtimes

EXPLANATORY NOTE

This Amendment No. 1 to Form 20-F (the "Form 20-F/A") amends our annual report on Form 20-F for the year ended June 30, 2023 (the "Annual Report"), which was originally filed with the U.S. Securities and Exchange Commission on October 18, 2023. The purpose of this Form 20-F/A is to amend certain information presented under (1) Item 15, Controls and Procedures, Evaluation of Disclosure Controls and Procedures to include management's assessment of internal controls over financial reporting, and (2) to revise and file herewith Exhibits 12.1 and 12.2, respectively; to reflect the Company management's certification of its internal control over financial reporting.

This Form 20-F/A does not reflect events occurring after the filing of the Annual Report and does not modify or update the disclosure therein in any way except as described above or herein. No other changes have been made to the Annual Report. The filing of this Form 20-F/A should not be understood to mean that any statements contained in the Annual Report, as amended by this Form 20-F/A, are true or complete as of any date subsequent to the original filing date of the Annual Report. Accordingly, this Form 20-F/A should be read in conjunction with the Annual Report.

Item 15. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Exchange Act")) that are designed to ensure that information required to be disclosed in ours reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer, Non-Executive Chairman, and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Our management, with the participation of our Chief Executive Officer, Non-Executive Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of June 30, 2023. Based upon that evaluation, our Chief Executive Officer, Non-Executive Chairman and Chief Financial Officer concluded that, as of June 30, 2023, our disclosure controls and procedures were effective to accomplish their objectives at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer, Non-Executive Chairman and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of June 30, 2023, based on the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013). Based on our evaluation under the criteria set forth in Internal Control — Integrated Framework, our management concluded that our internal control over financial reporting was effective as of June 30, 2023.

This Annual Report does not include an attestation report of the Company's registered public accounting firm as we are an emerging growth company.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) that occurred during the period covered by this Annual Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 19. Exhibits

12.1 — <u>Certification of Principal Executive Officer</u> pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

12.2 — <u>Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F/A and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

BIONOMICS LIMITED

Date: By:	January 11, 2024 /s/ Spyridon Papapetropoulos, M.D.
Name:	Spyridon Papapetropoulos.
Title:	Chief Executive Officer and Director
By:	/s/ Timothy Cunningham
Name:	Timothy Cunningham
Title:	Chief Financial Officer

EXHIBIT 12.1

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934 AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

- I, Spyridon Papapetropoulos, certify that:
 - 1. I have reviewed this Annual Report on Form 20-F of Bionomics Limited;
 - 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 - 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 - 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (bc) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (ed) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the registrant's most recent fiseal quarter (the registrant's fourthfiseal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
 - 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors

and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 18 January 11, 20243

By: /s/ Spyridon Papapetropoulos Spyridon Papapetropoulos President and Chief Executive Officer (Principal Executive Officer)

<u>EXHIBIT 12.2</u> CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934 AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Tim Cunningham, certify that:

1. I have reviewed this Annual Report on Form 20-F of Bionomics Limited;

- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (bc) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (ed) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the registrant's most recent fiscal quarter (the registrant's fourthfiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 18 January 11, 20243

By: /s/ Tim Cunningham

Tim Cunningham Chief Financial Officer (Principal Finance Officer)

Acting Chief Financial Officer