August 30, 2023

Brian Thomas, Ph.D. Chief Executive Officer Metagenomi Technologies, LLC 1545 Park Avenue Emeryville, CA 94608

Technologies, LLC

2023

Statement on Form S-1

Re: Metagenomi

Draft Registration

Submitted August 3,

CIK 0001785279

Dear Brian Thomas: 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 filed August 3, 2023 Cover Page Please disclose on the 1. prospectus cover page whether your offering is contingent upon final approval of your Nasdaq listing. Please ensure the disclosure is consistent with your underwriting agreement. Overview, page 1 2. Revise your Overview discussion to clarify that you have no approved products and that all of your product candidates are preclinical. 3. We note there are other companies using CRISPR/CAS technology, alternative nuclease-Brian Thomas, Ph.D. FirstName LastNameBrian Technologies, Thomas, Ph.D. Metagenomi LLC Comapany August 30, NameMetagenomi Technologies, LLC 2023 August Page 2 30, 2023 Page 2 FirstName LastName based genome editing technologies, recombinase DNA and RNA gene writing, epigenetic editing, etc. Please explain your belief that your toolbox "uniquely" positions you to access the entire genome when you have indicated that there are private companies about which little is known. Figure 1. Our Toolbox, page 2

5. Please remove the statement claiming your base editors will accelerate therapeutic development, as it appears speculative. Figure 2: Therapeutic Translation., page 4 Please revise this graphic to separate the "Clinical" column into 6. Phase I, Phase II and Phase III to clearly represent what development stages must be completed prior to commercialization of your therapeutic candidates. In addition, please combine your columns labeled "lead optimization" and "IND-enabling" into one preclinical development column. 7. We note the inclusion of therapeutic candidates for renal disease and autoimmune/immuno-oncology in your pipeline table. Given the limited disclosure related to these programs, please explain why they are sufficiently material to your business to warrant inclusion in your pipeline table. If they are material, please expand your disclosure in the Business section to provide a more fulsome discussion of these programs, including a description of development activities conducted. Alternatively, remove any programs that are not currently material from your pipeline table on pages 4 and 158. 8. We note that the gene for cardiovascular disease is "undisclosed." If this gene has been determined, please revise your table, to identify the gene and describe this program. Critical Accounting Policies and Significant Judgments and Estimates, page 116 We note the following disclosure from page 223: "The grant date fair 9. value of all awards made under our 2023 Plan and all other cash compensation paid by us to any nonemployee director in any calendar year for services as a non-employee director shall not ; provided, however, that such amount shall be \$ exceed \$ for the calendar year in which the applicable non-employee director is initially elected or appointed to the board of directors." Please revise hereunder to disclose the extent to which any stock-based compensation has been awarded during 2023 (also noting the grants in March and June 2023 as disclosed on page F-43) and provide the fair valuations of each award. Once you have an estimated offering price or range, please explain to us how you determined the fair value of the common stock underlying your equity issuances and the reasons for any Brian Thomas, Ph.D. FirstName LastNameBrian Technologies, Thomas, Ph.D. Metagenomi LLC Comapany August 30, NameMetagenomi Technologies, LLC 2023 August Page 3 30, 2023 Page 3 FirstName LastName differences between the recent valuations of your common stock leading up to the initial public offering and the estimated offering price. This information will help facilitate our review of your accounting for equity issuances including stock compensation. Business Our Metagenomics Platform, page 131 10. Please remove references to your genome editing systems potentially being "best-in-class" and "first-in-class" as it does not appear that your platform has resulted in any FDA approved therapies and future approved therapies are speculative.

Please increase the font size of the text within the table.

4.

11. We note your disclosure stating you are eligible to receive royalties ranging from a midsingle digit to a "low double-digit" percentage of annual net sales from licensed products. As drafted, it is unclear if "low double-digit" refers to a range within ten percentage points of a mid-single digit percentage. Please revise your disclosure to limit the royalty range to ten percentage points. Given your disclosure that you received a non-refundable upfront 12. payment of \$40.0 million, a \$5.0 million payment for the first year of research costs, Moderna's obligation to reimburse you for up to \$5.0 million in annual research and development costs, your eligibility to receive development, regulatory and sales milestone payments and royalty payments, explain the statement that you will work with Moderna on the co-development and commercialization of products with respect to the DT Co-Co program and share costs and profits equally. Explain how sharing profits equally is consistent with a royalty provision. Will the milestone payments be considered part of Moderna's share of the costs? Will the royalty payments to Metagenomi be considered part of its share in the profits? Our License and Collaboration Agreements, page 181 13. For each agreement discussed in this section, please disclose the aggregate amounts paid to date and the aggregate amount of remaining potential payments under each agreement. Affini-T Development, Option and License Agreement, page 182 14. Please file the Development, Option and License Agreement entered into with Affini-T as an exhibit to your registration statement or tell us why you do not believe such a filing is required. 15 Explain the distinction between a regulatory milestone and developmental milestone. Additionally, given that you are eligible to receive a milestone of 933,650 based on an achievement of a regulatory milestone event, regardless of the value of the shares at the time of the event, please disclose the trigger event or tell us why you believe such information is not material. Brian Thomas, Ph.D. Metagenomi Technologies, LLC August 30, 2023 Page 4 Intellectual Property Patent Portfolio, page 188 16. Please specify the type of protection (e.g., composition of matter, method of use or process) for each patent or patent application disclosed in this section. Principal Stockholders, page 233 17. Please revise the table on page 234 to identify the natural person(s) with voting and/or dispositive control over the shares held by Humboldt Fund I, LP, and Sake Holdings LLC. General Please supplementally provide us with copies of all written 18. communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your 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 Jenn Do at 202-551-3743 or Angela Connell at 202-551-3426 if you

have questions regarding comments on the financial statements and related matters. Please contact Tyler Howes at 202-551-3370 or Suzanne Hayes at 202-551-3675 with any other questions.

FirstName LastNameBrian Thomas, Ph.D. Comapany NameMetagenomi Technologies, LLC

Corporation Finance August 30, 2023 Page 4 Sciences FirstName LastName Sincerely, Division of

Office of Life