June 9, 2021

Mehesh Karande Chief Financial Officer Omega Therapeutics, Inc. 20 Acorn Park Dive Cambridge, MA 02140

Re: Omega Therapeutics,

Draft Registration

Statement on Form S-1

Inc.

Filed may 10, 2021 CIK No. 0001850838

Dear Mr. Karande:

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 May 10, 2021 Overview, page 1 1. Please revise the opening paragraph to provide context and balance to your disclosure that you are an biopharmaceutical company and to highlight that your operations early-stage are preclinical in nature. We note your statement 2. on page 1 that you believe your platform will fundamentally transform human broad potential applicability across a range of medicine and has diseases and conditions. Please place this selected disclosure in its proper context by revising your Summary disclosure to make it clear, per your disclosure of your intellectual property, that your in-licensed patents relate to specific diseases and conditions, such as HCC and NSCLC. Mehesh Karande FirstName LastNameMehesh Karande Omega Therapeutics, Inc. Comapany June 9, 2021NameOmega Therapeutics, Inc. June 9, Page 2 2021 Page 2 FirstName LastName Please clarify the meaning or scientific or technical terms the first 3. time they are used in the Summary and the Business sections or in close proximity thereto in order to ensure that lay readers will understand the disclosure. For example, please briefly explain what you mean by oncogenes, HCC xenograts, lipid excipients, effector proteins and cationic

and ionizable LNPs. Please replace your statement that you have achieved in vivo proof of concept with an objective description of your preclinical results and remove the prediction that you expect to achieve in vivo preclinical proof-of-concept for multiple additional programs in You may indicate when you expect to complete in vivo studies but not the results of such studies. Advantages of Omega Platform, page 3 5. Please balance your disclosure with equally prominent disclosure of the disadvantages of your platform, including clinical data relating to novel products can be difficult to analyze and approval of novel products can be more expensive and take longer. Our Portfolio, page 4 6. Please revise your pipeline table on pages 4 and 113 to limit the preclincal phases presented as separate columns to two, discovery and preclinical trials, and to include separate columns for each of the Phase 1, 2 and 3 trials. We also note that your Summary pipeline table contains text that is difficult to read. Please revise to increase the font size and clarify which candidate(s) the text relates to. We note the inclusion of several product candidates relating to the 7. treatment of relating to the corneal regeneration, idiopathic pulmonary fibrosis and small cell lung cancer diseases with undisclosed targets in the second, fourth and seventh rows in your Summary pipeline table. Given the lack of disclosure related to these programs, please explain why these programs are sufficiently material to your business to warrant inclusion in your pipeline table. If they are material, please expand your disclosure in your Business section to provide a more fulsome discussion of these programs, including a description of preclinical studies or development activities conducted. Alternatively, remove any programs that not currently material from your pipeline table on pages 4 and 113. Developments by competitors may render our products or technologies obsolete..., page 47 We note your disclosure on page 48 and 133 that several of your 8. competitors are developing technologies focused on gene-expression control using various technologies. Please disclose whether any of your competitors are developing gene-expression therapies for the treatment of diseases such as HCC, NSCLC and ARDS. Our restated certificate of incorporation will designate specific courts as the exclusive forum..., Mehesh Karande FirstName LastNameMehesh Karande Omega Therapeutics, Inc. Comapany June 9, 2021NameOmega Therapeutics, Inc. June 9, Page 3 2021 Page 3 FirstName LastName page 85 9. We note your disclosure that your forum selection provision in your restated certificate of incorporation may limit a shareholder s ability to bring a claim in a judicial forum that it finds favorable for disputes with you and may discourage such lawsuits. Please revise this risk factor and your disclosure on page 179 to discuss that there is also a risk that your forum selection provision may result in increased costs for investors to bring a claim.

Use of Proceeds, page 90

10. Please revise to identify the specific product candidates for which you intend to use the proceeds of the offering, quantify the approximate amount of proceeds you intend to allocate toward each and indicate how far the proceeds from the offering will allow you to proceed with the continued development of each programs. Management's Discussion and Analysis of Financial Condition and Results of **Operations** Results of Operations, page 103 We note your disclosure on page 102 that you do not track research and 11. development expenses on a program by program basis. In light of the significant increase in research and development expenses, please revise to provide a breakdown of your research and development expenses by type of expense. Hepatocellular Carcinoma, page 125 12. We refer to your disclosure on pages 126 and 127 regarding your preclinical studies comparing your product candidate OTX-2002 with sorafenib. Please expand your disclosure to the disclose any observed adverse side effects and the primary and secondary endpoints, as applicable. Manufacturing, page 131 13. We refer to your disclosure on page 132 regarding a third-party provider with extensive LNP intellectual property and a highly experienced CDMO that will manufacture your product candidates that you will rely on for your delivery technology. To the extent you are dependent on the third-party provider with extensive LNP intellectual property, please identify the party and file any agreements as exhibits to the registration statement. See Item 101(h)(4)(v) and Item 601(b)(10) of Regulation S-K. Alternatively, provide an analysis supporting your degermation that such information is not required. Intellectual Property, page 133 We refer to your disclosure on pages 134 and 135 regarding your patent 14. portfolio for specified products and technologies. For each of the product and technology areas identified, please clarify your disclosure to specify the number of patents and/or patent Mehesh Karande FirstName LastNameMehesh Karande Omega Therapeutics, Inc. Comapany June 9, 2021NameOmega Therapeutics, Inc. June 9, Page 4 2021 Page 4 FirstName LastName applications, whether such patents or patent applications are owned or licensed, as well as the applicable jurisdiction for each group of patents or patent applications. You also disclose on page 133 that all patents and patent applications in your patent portfolio will expire between 2035 and 2042. Please specify when you expect the patents issuing from patent applications in each category of your patent portfolio to expire. 15. We note your disclosure on page 135 regarding other patent applications relating to novel OEC compositions and their use for treating additional disorders, including other cancers, inflammatory disorders, neurological and metabolic disorders. Please specify the number of patent applications, whether they are owned or licensed, and applicable jurisdiction of such patent applications. License Agreement with Flagship, page 135

16. You disclose on page 135 that you assigned to Flagship certain foundational intellectual property ("Foundational IP") and obtained an exclusive, royalty-bearing license from Flagship under such Foundational IP to develop any product thereof. Please expand your disclosure to describe the nature, scope and expiration of intellectual property comprising the Foundational IP. Additionally describe your obligations under the Flagship agreement. 17. We note your disclosure on page 136 regarding the Flagship license agreement. Please expand your disclosure of the type of product or technology that the licensed patents relate to and when the last-to-expire licensed patent is scheduled to expire. Please expand your disclosure on page 136 of the intellectual property 18 that is jointly conceived by you and Flagship, including who is responsible for the clinical development of such intellectual property included within the scope of the license. Exclusive and Co-Exclusive License Agreements with WIBR, page 136 19. Please revise your disclosure to specify the aggregate amounts paid to date (including the payment of any upfront or execution fees), when the last-to-expire patent is scheduled to expire and the royalty term, as applicable, under your exclusive license agreement with WIBR. 20. We refer to your disclosure on page 136 regarding your co-exclusive license agreement with WIBR. Please revise your disclosure to disclose when the last-to expire licensed patent is scheduled to expire, the royalty term and the aggregate amounts paid to date under the license agreement (including payment of any upfront or execution fees). We also note your disclosure on page 136 that your co-exclusive rights under the WIBR Co-Exclusive Agreement will become exclusive if the co-exclusive license agreement between WIBR and the co-exclusive licensee is terminated. Please expand your disclosure of the termination provisions of your co-exclusive license agreement with WIBR. Please describe the nature of an invention that would result in the 21. third party to the SRA Mehesh Karande FirstName LastNameMehesh Karande Omega Therapeutics, Inc. Comapany June 9, 2021NameOmega Therapeutics, Inc. June 9, Page 5 2021 Page 5 FirstName LastName obtaining non-exclusive rights to the licensed patents. You disclose on page 136 that your co-exclusive rights under the WIBR 22. Co-Exclusive Agreement will become exclusive if the co-exclusive license agreement between WIBR and the co-exclusive licensee is terminated. Please expand your disclosure of the termination provisions of your Co-Exclusive Agreement with WIBR. Agreements with Acuitas, page 138 23. We refer to your disclosure on page 138 regarding your development and option agreement with Acuitas. Please disclose when the last-to-expire licensed patent under the second option are scheduled to expire. With respect to your disclosure of the Acuitas license agreement, please revise to disclose the aggregate amounts paid to date and when the last-to-expire licensed patent is scheduled to expire. We also note your disclosure on page 66 that you depend substantially on your license agreements,

including your Acuitas

license agreement. Please file the Acuitas option and license agreements as exhibits to the registration statement or provide analysis as to why it would not be required under Item 601(b)(10) of Regulation S-K. Note 2 - Summary of Significant Accounting Policies Stock-based Compensation, page F-11 Once you have an estimated offering price or range, please provide us 24. an analysis explaining the reasons for the differences between 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 the stock options, warrants and other stock-based compensation, as well as beneficial conversion features. Please discuss with the staff how to submit your response. General 25. 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 David Burton at 202-551-3626 or Kevin Vaughn at 202-551-3494 if you have questions regarding comments on the financial statements and related matters. Please contact Jane Park at 202-551-7439 or Suzanne Hayes at 202-551-3675 with any other questions.

Sincerely,

Division of

Corporation Finance Mehesh Karande Omega Therapeutics, Inc. FirstName June LastNameMehesh Karande 9, 2021 Page 6 Comapany NameOmega Therapeutics, Inc. June 9, 2021 Page 6 Office of Life Sciences FirstName LastName