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September 14, 2020

Via EDGAR and Courier

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Life Sciences
100 F Street, N.E.
Washington, D.C. 20549

Attention: Michael Fay
Daniel Gordon
Deanna Virginio
Ada D. Sarmento

Re: Athira Pharma, Inc.
Registration Statement on Form S-1
Filed August 26, 2020
Amendment No. 1 to the Registration Statement on Form S-1
Filed on September 9, 2020
File No. 333-248428

Ladies and Gentlemen:

On behalf of our client, Athira Pharma, Inc. (the "**Company**"), we submit this letter in response to comments from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**Commission**") contained in its letter dated September 10, 2020, relating to the above-referenced Registration Statement on Form S-1 (the "**Registration Statement**"). On behalf of the Company, we are concurrently publicly filing via EDGAR Amendment No. 2 to the Registration Statement (the "**Amended Registration Statement**").

In this letter, we have recited the comments from the Staff in italicized, bold type and have followed each comment with the Company's response. Except for page references appearing in the headings and Staff comments below (which are references to the Registration Statement), all page references herein correspond to the pages of the Amended Registration Statement.

Registration Statement on Form S-1
Overview, page 1

1. ***We note your response to prior comment 1. Your statement that "ATH-1017 significantly improved brain activity as measured by P300 latency, a***

functional measure that highly correlates with cognition" appears to imply an expectation that the improvement in P300 latency will result in cognitive improvement as you state on page 8. Please revise this and any similar statements to clarify that you have yet to establish a connection between the P300 latency results observed in your Phase 1 trials and improved cognition. Please further revise your disclosure to provide appropriate context for various conclusions and predictions as to the performance of your product candidates and revise and/or remove any statements that imply efficacy. For example, please revise your statement on page 2 that appears to conclude that your ATH platform has the ability to "enhance the body's repair mechanism of HGF/MET" and the last sentence under "Differentiated Approach" on page 7 that appears to conclude that treatment with ATH-1017 will produce certain beneficial effects. Please remove the row related to ATH-1017 from the chart on page 8 as the disclosure makes a prediction regarding the efficacy of the treatment as noted above. We note your disclosure on page 4 that "average latency across the AD treatment group had returned to levels close to those observed in healthy elderly subjects by the end of an 8-day treatment cycle" and a similar statement on page 135 that ATH-1017 "normalized" the P300 latency of AD subjects in a Phase 1b clinical trial within 8 days of treatment. Please remove any reference to normalization as it implies efficacy and instead present the data that you used to draw the conclusion. Please also disclose how you selected the healthy young and healthy elderly volunteers in your Phase 1 clinical trials and how you determined that they were healthy.

In response to the Staff's comment, the Company has revised its disclosures throughout the Amended Registration Statement.

Our Pipeline and ATH Platform, page 2

2. ***We note your disclosure that you may cross-reference the already active IND for ATH-1017 for the treatment of AD in the second IND for ATH-1017 for the treatment of PDD. Please revise your disclosure to clarify whether the second IND for PDD has been submitted to the FDA. If not yet submitted, please move the line for PDD to reflect its current status in pre-clinical development. We note your response to prior comment 3 that the company intends to initiate the Phase 2/3 LIFT-AD clinical trial in early September yet your disclosure in the prospectus indicates that the company intends to initiate the trial by the end of 2020. Until you initiate the trial, please remove any references to the company being in the "late" clinical-stage.***

In response to the Staff's comment, the Company has revised its pipeline chart. The Company respectfully advises the Staff that the Company has initiated the Phase 2/3 LIFT-AD clinical trial.

Risks Associated with Our Business, page 9

3. ***We note your response and revisions to prior comment 7. Please revise this section to highlight the risks associated with using EEG methods and the risks associated with having limited data from only 11 AD subjects from your Phase 1 trials.***

In response to the Staff's comment, the Company has revised its disclosures on pages 10 and 23 of the Amended Registration Statement.

Insights from Approved Therapies, page 120

4. ***We note your revised disclosure in response to prior comment 10. Please revise to make the disclosure added to the Source note below Figure 12 part of the lead-in paragraph to Figure 12. Please also revise your disclosure to clarify whether the similarities disclosed between the studies of donepezil and rivastigmine are also the same for the ATH-1017 Phase 1 clinical trial. We note, for example, that there is no trend line for a placebo control in the ATH-1017 graph and that the subjects included both healthy and AD patients. If not similar to the studies of donepezil and rivastigmine, please revise to disclose why such comparisons are appropriate or remove the comparisons.***

In response to the Staff's comment, the Company has revised its disclosures to remove Figure 12 and related disclosures from the Amended Registration Statement.

Event-Related Potential, page 128

5. ***We note your response to prior comment 11. Please revise your disclosure to include a discussion of the objective data observed to support your statement that "the sustained effects on P300 latency observed in the pre-dose recordings on subsequent testing days...most likely reflect the long-term regeneration of neuronal connections and the improvement in brain function." Alternatively, please remove the statement.***

In response to the Staff's comment, the Company has revised its disclosures on page 128 of the Amended Registration Statement.

Our Neuropsychiatric Program (ATH-1019), page 134

6. ***We note your response to prior comment 12. Please revise your disclosure to include a discussion of the objective data observed to support your statement that ATH-1019 "has been shown to activate the HGF/MET system, and distribute to the CNS, and is neuroactive in animal models." Alternatively, you may describe what you have designed ATH-1019 to do and remove the statement.***

In response to the Staff's comment, the Company has revised its disclosures on page 134 of the Amended Registration Statement.

Our Collaboration and Grant Agreements
Washington State University Research Foundation License Agreement and Amended and Restated Washington State University License Agreement, page 140

7. ***We note your response to prior comment 13. Please note that we consider the royalty term to be a material term of a license agreement that should be disclosed in the registration statement. Please disclose when the royalty term is currently expected to expire. We note your disclosure that the term of the agreement will continue until the earlier of the date that no valid claim in a licensed patent remains enforceable or payment of earned royalties, once such payments begin, ceases for more than four consecutive calendar quarters. Please revise to disclose when the licensed patents are currently expected to expire. Please also revise your disclosure in this section to include the information from your response regarding whether you expect the joint ownership of the patent with Pacific Northwest Biotechnology, Inc. to have any effect on your license of the patent or your development of the product candidates to which the patent relates.***

In response to the Staff's comment, the Company has revised its disclosures on page 141 of the Amended Registration Statement.

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Please direct any questions regarding the Company's responses or the Registration Statement to me at (206) 883 2524 or mnordtvedt@wsgr.com.

Sincerely,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ Michael Nordtvedt
Michael Nordtvedt

cc: Leen Kawas, Athira Pharma, Inc.
Glenna Mileson, Athira Pharma, Inc.
Bryan D. King, Wilson Sonsini Goodrich & Rosati, P.C.
Charles S. Kim, Cooley LLP
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