United States securities and exchange commission logo

September 10, 2020

Leen Kawas, Ph.D.
Chief Executive Officer
Athira Pharma, Inc.
4000 Mason Road, Suite 300
Seattle, WA 98195

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

Dear Dr. Kawas:

We have reviewed your 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 amending your registration statement and providing the requested information. 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 any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

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.

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.

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.

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.

Leen Kawas, Ph.D.
FirstName LastNameLeen Kawas, Ph.D.
Athira Pharma, Inc.
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September NameAthira
2020 Pharma, Inc.
September

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.

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.

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.

We remind you that the company and its management are responsible for the accuracy
and adequacy of their disclosures, notwithstanding any review, comments, action or absence of
action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate
time for us to review any amendment prior to the requested effective date of the registration
statement.

You may contact Michael Fay at 202-551-3812 or Daniel Gordon at 202-551-3486 if you
have questions regarding comments on the financial statements and related matters. Please
contact Deanna Virginio at 202-551-4530 or Ada D. Sarmento at 202-551-3798 with any other
questions.

Sincerely,

FirstName LastNameLeen Kawas, Ph.D.

Division of Corporation Finance

Comapany NameAthira Pharma, Inc.

Office of Life Sciences

cc: Michael Nordtvedt, Esq.

FirstName LastName