Reviewer's report

Title: A multi-chamber tissue culture device for load-dependent parallel evaluation of tendon explants

Version: 1 Date: 10 Jul 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

No - there are minor issues

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues
OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This study details a relatively novel tissue sample culturing system to assess the effects of tension on whole tendon samples

The study has been performed in a competent fashion, using state of the art equipment. However, tendons are not subjected to continuous tension strains. Indeed, they thrive under cyclical tension conditions. Hence, the model, though the authors seem to have validated it, is not representative of physiological conditions, and/or pathology. This should be specified.

REQUESTED REVISIONS:

The authors are obviously in love with what they have done, and I share with them much of their enthusiasm. However, the large number of genes selected may introduce a degree of chance in altered expression which does not seem to be accounted for in the statistical analysis. Some of the genes studies are involved in inflammation, which has recently been resurrected as a primum movens of tendinopathy (see https://www.ncbi.nlm.nih.gov/pubmed/28596062 and https://www.ncbi.nlm.nih.gov/pubmed/28002908)

ADDITIONAL REQUESTS/SUGGESTIONS:

no

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
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