Reviewer’s report

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

Version: 0 Date: 14 Sep 2018

Reviewer: Jason Shearn

Reviewer's report:

This manuscript examines the use of an ex vivo culture system for tendon explants to understand homeostasis and healing. Developing an explant system could be beneficial to the field, but this reviewer has concerns regarding this current system. The novelty of this system is low, a similar system was used by Ed Grood in the 1990's to examine rat tail fascicles. It has a static load applied to a tendon, which is not physiologic. The loaded tendon show genetic differences compared to the snap frozen controls so this system does not maintain the tendon phenotype during culture, but this was not addressed in the discussion. Are these changes critical and how would that be answered? The gene analysis has high levels of variability. What is the cause of this variability? The manuscript in its current form is not compelling and does not add a great deal to the field.

Figure 1 is difficult to comprehend.

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.

Yes

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?
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I am able to assess the statistics
Quality of written English
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Acceptable

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