Reviewer's report

Title: Viscoelastic properties of bovine knee joint articular cartilage: dependency on thickness and loading frequency.

Version: 2 Date: 24 August 2013

Reviewer: Cathy HOLT

Reviewer's report:

It is clearly written and comprehensive and, as a technical note, the manuscript adds to previous studies building on a body of knowledge relating to the mechanical response of AC to loading. Referencing is good and useful to the researcher interested in AC for modelling and research purposes. There is some reference to the link between transient loading at HS and early onset OA and as such it is clinically relevant, however I do not think that it has really spelled out the clinical impact of what the study has added.

It could be published in this form but would be enhanced by the following additions:

1. A more clinical view of the meaning, and importance of dynamic mechanical loading. How does it really link with the current understanding of HS transient frequency and OA?
2. A justification for using bovine rather than human AC, and why it was not possible to test healthy and OA human tissue for comparison.
3. Clearer indication of the significant differences on the tables.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests