Reviewer’s report

Title: Topical Zoledronic Acid decreases Micromotion induced Bone Resorption in a Sheep Arthroplasty Model

Version: 2 Date: 07 Sep 2017

Reviewer: Per Aspenberg

Reviewer's report:

1. I come back to the strain issue. Because the implant-bone (scar) interface surface is small and paralell to the direction of load, shearing forces are high. Moreover, in principle all the load carried by the joint would be transferred as shearing stress at this interface if there were bony contact. I don't think your reference to acetabular displacement addresses this issue, as shearing stresses would affect larger areas and the top of the acetabulum carries load by compressive stresses. Please comment.

2. You mention Perren about tissue differentiation theories. I think Lutz Claes or perferably Dennis Carter would provide better references, although it dates back to Pauwels 1960.

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

Yes

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?
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Yes

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I am able to assess the statistics

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

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