Reviewer’s report

Title: The effects of zoledronate on the survival and function of human osteoblast-like cells

Version: 0 Date: 08 Sep 2015

Reviewer: Naoyuki Takahashi

Reviewer's report:

The authors examined effects of zoledronate (ZOL) at μM levels on survival, migration, differentiation of osteoblasts. They showed that ZOL affected osteoclast survival, migration, but not differentiation of osteoblasts. These findings are interesting for understanding the role of bisphosphonates in osteoblast differentiation and function. However, these findings are not novel, because there are many similar reports demonstrating that bisphosphonates suppressed proliferation and differentiation of osteoblasts (Idris AI et al., Calcif Tissue Int, 2008; Walter C et al. Oral Dis, 2011; Reinholz GG et al. Cancer Res, 2000 etc.). The other problem of this manuscript is lack of the careful explanation for the results.

1. There is no in vivo effect of ZOL on osteoblasts in the manuscript. Apoptotic osteoblasts can be observed when a large amount of ZOL is administrated to animals or humans? Is the ZOL-induced apoptosis of osteoclasts an important effect of ZOL on bone?

2. Is the ZOL-induced apoptosis specific for osteoblast lineage cells? Other stromal cells should be examined.

3. Figure legends: Important information is not provided in figure legends. More detailed explanation should be added to each figure legend.

4. Figure 4. It is very difficult to understand the meaning of Fig. 4. The authors should precisely explain the meaning of Fig. 4 in the figure legend and the result section.

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.
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.

Not relevant to this manuscript

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

Not suitable for publication unless extensively edited

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