Reviewer’s report

Title: Effects of JSOG-6 on protection against bone loss in ovariectomized mice through regulation of osteoblast differentiation and osteoclast formation

Version: 1 Date: 10 January 2014

Reviewer: Jean Langlois

Reviewer’s report:

Major compulsory revisions

1. The structures of Methods and Results paragraphs from the abstract should be deeply revised in order follow conventional rules: methods should develop precisely the technics involved (microCT, serum biomarkers assessment, in vitro cultures etc...) and results should show the very objective resulting data. What we find here in this abstract is too fuzzy

2. There are too many subjective comments in the Results part. We don't need introduction sentences like "To assess whether JSOG-6 exhibits anti-osteoporotic activity, an in vivo experiment was performed employing an OVX-induced bone loss mouse model" or "To determine the effects of JSOG-6 on the bone metabolic biomarkers, blood samples were collected, and biochemical analysis of the serum was performed in OVX mice" (same for the others sub parts). Second, we don't want to see subjective comments in the Results part (see "These data suggest that JSOG-6 treatment prevents ..." or "These findings suggest that JSOG-6 might modulate the process of osteoclastogenesis via ..."). These kind of subjective analyses are to be discussed in the last part of the manuscript (Discussion).

3. Please revise introduction sentences of both Introduction and Discussion Parts. Starting from a wide overview (bone metabolism... osteoporosis ... treatment of osteoporosis ... JSOG6) to focus on the subject, for the introduction; reverse the process for the first paragraph of the discussion.

4. It seems awkward to finish the introduction (last sentence) with the results ("The findings demonstrate that JSOG-6 protects against ...")

Minor Essential Revisions

5. Please be more convincing or precise than "These reported data suggest that JSOG-6 might have the potential to alleviate the symptoms of bone loss-associated diseases". It's probably more than just "to alleviate the symptoms", as you have spent hours and days to perform these experiments

6. Please revise the sentence "In the present study, we investigated the activities of JSOG-6 in vitro and in vivo bone-remodeling models and examined its underlying molecular mechanism" (or add a second "in" between JSOG-6 and in
vitro)

7. Whenever a "significant result" announced, we would like to see a "p-value" (between brackets at the end of the sentence for example)

8. We regret there was no limitation stated (at least one limitation of each technic: why microCT and no histology ? why these biomarkers and not different ones ?)

9. We regret no clinical or experimental perspective was stated.

10. It might be more logical to present experiments from in vitro to animal in vivo studies, in order to follow a progression in terms of possible clinical application

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