Reviewer’s report

Title: Effects of Salubrinal on Development of Osteoclasts and Osteoblasts from Bone Marrow-Derived Cells

Version: 1 Date: 16 May 2013

Reviewer: Mercè Giner

Reviewer’s report:

Yokota et al report a study about the effect of salubrial in osteoclast and osteoblast from RANKL-injected mice and control mice. Authors are to be congratulated for trying to provide new data on this subject. However, the manuscript has some drawbacks that difficult the interpretation of results.

Major issues

1. More details about methods are needed
   a) Give some references or explanation to the concentration of salubrinal used, and also he incubation time chosen in the study
   b) Method for establishing RAW 264.7 cells need to be given in details
   c) Give more information about lysis of RAW264.7 cells
   d) How do quantify signal intensities protein?
   e) Explain how do you calculate the values of mRNA?

2. Results about BMD are confused.
   a) What is the meaning of analyzing the BMD in OVX-mice if only use cells from RANKL-injected mice?
   b) What values of total BMD had the RANKL-injected mice? Why you show values of ulna and humerus of BMD and not of femur or tibia?
   d) Is there any effect of the salubrinal on the growth and proliferation of the cells (HSCs, MSCs and RAW264.7) in vitro?

3. Discussion is a little poor,
   a) Discussion explains the role of eIF2# but does not show any results for this gene, however not explained and not provided bibliography of NFATc1, which is the gene study. I suggest rewrite the discussion of NFATc1 gene.
   b) A general lack of references and data from other authors. You may compare your work with relevant studies of others.

Minor issues

1. Background p.3: I think the sentences about bisphosphonates “… though long-term usage may cause osteonecrosis of the jawbone and fracture of the
fémur” is a little hard, perhaps is better to say that some bisphosphonates may be associated with an increased risk of osteonecrosis of the jawbone and atypical femur fracture.

2. Sometimes write TRACP and other times write TRAP

3. Results: p.12 use comma or no in the numeric results (eg. 53,213 ± 3545 ). Salubrinal at 2 µM reduced CFU-GM with a p=0.01 no 0.001

The authors of the manuscript should also include both limitations and strengths of the study.

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