Reviewer's report

Title: Screening of protein kinase inhibitors identifies Rottlerin as a potent inhibitor of osteoclastic acid secretion and bone resorption

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Reviewer: Jean-Pierre David

Reviewer's report:

In this paper Sorensens et al performed a pharmacological screen for inhibitors of bone resorption by human osteoclasts. They focus on the effects of kinase inhibitors on acidification, a process essential for bone resorption.

The manuscript is difficult to follow due to major editing mistakes such as the lack of clear legend for the figure 2 (the provided legend is a copy of figure1)

Major compulsory revisions

I had other major problems with the results presented and their interpretation:

1-The choice of 10 #M as 'standard' dose to compare the inhibitors is quite artificial and certainly not based on their dose effect on kinase activation.

2-Nowhere the efficiency of the treatment in term of kinase inhibition is demonstrated. That may explain the lack of effect of general tyrosine kinase inhibitors that should certainly be inhibiting CSF1 receptor activation by M-CSF, as well as c-src activation.

3-It is difficult to extrapolate on the role of PKCs or more specifically PKC# (Rottlerin effect) without demonstrating the presence of the kinase in the extract used for the assay.

I therefore cannot recommend the paper for publication.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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