Reviewer's report

Title: Rapamycin reduces bone growth, decreases angiogenesis and lowers chondroclastic activity in young rats

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Reviewer: Fernando Santos

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Sanchez and Yz studied two groups of young rats to confirm the adverse effect of rapamycin administration on growth and growth plate structure and dynamics. The manuscript report new findings on the differences in growth plate modifications between 2 weeks and 4 weeks of treatment and on the local expression of some factors supposed to play a role in the process of endochondral ossification.

Major objections to the study are:

1. Immunohistochemistry and in situ hybridization are good techniques to assess the pattern of distribution of a given protein and mRNA, respectively. However, these techniques are not strictly suitable for quantification and have a limited value to assess small – moderate differences in the degree of expression.

2. The authors should clarify why food efficiency ratio of animals treated with rapamacyin was higher than that of control rats if the groups were pair-fed and control rats gained more weight after 2 and 4 weeks.

3. The inclusion of untreated control group fed ad libitum would be useful for the understanding of changes seen at the growth plates.

Minor objections

3. The amount of chow eaten by the different groups of rats should be provided, just to assess the degree of reduction in food intake.

Level of interest: An article of importance in its field

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