Reviewer's report

Title: Comparison of velcalcetide (AMG 416) and cinacalcet in rodent models of uremia

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Reviewer: piergiorgio messa

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The paper reports on the effects of a new agonist of the calcium-sensing receptor (CaSR) (Velcalcetide, AMG 416) compared with cinacalcet (which is an allosteric modulator of CaSR) in experimental models of severe acute kidney injury and chronic kidney disease.

The main results are: more pronounced and long lasting effects of AMG416 on PTH reduction as compared with cinacalcet.

Though the paper is of some interest, it is worth stressing that on this topic clinical studies are expected more than animal ones, given that most information supplied by the present study has been already established.

major

The kinetics of calcium has been grossly described: given the critical importance of this point, a more detailed description of the behaviour of calcium changes in the hours following the administration of the two drugs would be worth reporting.

A table showing the number of the PTH and Ca values at the different times might be more informative than some figures.

In the figure 3B it seems there is a rebound phenomenon of PTH levels at the 16th hour in the cinacalcet group: this is an unusual phenomenon, not yet described (as far as I know). Could the authors comment on this?

minor

in the background section, some comment on which could be the claimed benefits for the use of this new drug as compared with cinacalcet would also be welcome.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests