

Reviewer #1:

**Scientific Quality:** Grade C (Good)

**Language Quality:** Grade C (A great deal of language polishing)

**Conclusion:** Minor revision

**Specific Comments to Authors:** experimental animals in title can change to mice

Authors' response: Thank you for your time in reviewing. As suggested, the "experimental animals" in title has now been changed to "mice".

Reviewer #2:

**Scientific Quality:** Grade B (Very good)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Accept (General priority)

**Specific Comments to Authors:** I have reviewed your manuscript and found it to be well-written and informative. The study design, methods, and results are clearly presented, and the conclusions drawn are supported by the data. However, I do have a few minor comments and suggestions that may improve the clarity and impact of your manuscript: It would be beneficial to include corresponding images of the appendix to visually demonstrate the effects of R568 treatment. Providing visual evidence can help readers better understand and appreciate the observed changes in the appendix. The mechanism behind Fig4 lacks validation and elucidation, and this article merely observes the phenomenon.

Authors' responses: Thank you for your time in reviewing. We greatly appreciate your comments and suggestions. As suggested, additional images that visually demonstrate the effect of R568 treatment has now been added to the revised manuscript (see new Figure 2B).

In addition, we have revised the Figure 4 legend and provided more detailed explanations to diagram that illustrates how cholera toxin stimulates and how calcium/calcimimetic inhibits Cl<sup>-</sup> secretory diarrhea – focus of this study. However, we agree with the reviewer that the present study is primarily describing a phenomenon. Nonetheless, the present study has also utilized specific CaSR agonist and two tissue-specific CaSR knockouts to define the specificity and locate the tissue site of the calcium/calcimimetic action. Given this and considering the known action of cholera toxin in stimulating G<sub>s</sub>  $\alpha$ -subunit causing Cl<sup>-</sup> secretory diarrhea, we feel it necessary to include this simplified diagram that briefly summarizes how cholera toxin stimulates and how calcium/calcimimetic inhibits the observed Cl<sup>-</sup> secretory diarrhea using a mechanism that involves both nestin-expressing enteric neuron and villin-expressing epithelial cell. All this has now been discussed in the revised manuscript (see Discussion page, 1<sup>st</sup> paragraph; Figure 4 legend).