Review of: "Depolarization block of interneurons"

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Potential competing interests: No potential competing interests to declare.

The authors conduct a computational study of a model of interneurons. They use computational bifurcation analysis to study this model and find a Hopf bifurcation which leads to a stable equilibrium at high applied current, which the authors claim represents a depolarisation block.

In the introduction, the authors mention some papers about interneurons and the effects of depolarisation block. However, an overview of depolarisation block in similar neuronal models is missing. The fact, that for high applied current a depolarised state exists in the standard Hodgkin-Huxeley model is well known and the authors do not mention how the interneurons change this fact or present a novel view in this picture.

In the results section, the authors do a bifurcation analysis with respect to I_{ext}, which is mentioned as I_{syn} in the results. For the simulations with a synaptic current, the authors propose two models, but in the results do not mention which is used to make the plots. Also the figure 3 and 4 mention I_{ext}, while also having a synaptic current defined by g_{syn}, which is not how it is described in the modelling section.