Review of: "Depolarization block of interneurons"

Laure Buhry[1]

1 University of Lorraine

Potential competing interests: No potential competing interests to declare.

This manuscript is aimed at studying the behavior of an interneuron undergoing a depolarization block.
Although the main idea seems scientifically interesting in general and could have implications fo the study of pathological behaviors, I believe this paper could not be published without major revisions.

The author do not provide sufficient justifications of their modeling choices, neither from a biological point of view, nor from a technical point of view. This makes the paper difficult to evaluate. E.g.: what are the biological hypotheses that could underlie depolarization blocks? Regarding the model, the authors indicate they have used a “modified” Hodgkin-Huxley model to reproduce interneuronal behavior, but do not explain their parameter choices. Idem for the synapse: why choosing a bi-exponential synapse, not an exponential one for instance? What are the influence of tau_rise and t_fall? Why not choosing Poisson inputs for the stochastic part of the synapse? Why 100Hz?, etc.

Finally, there are spelling mistakes that should be corrected and some of the tables are still in Italian.