Salamandra Retina Ganglion FM97-ESM

Enhanced Simucore Model Based Upon: Fohlmeister, Miller Model of Action Potentials in Salamandra Retina Ganglion Cells, 1997; v. 2.0

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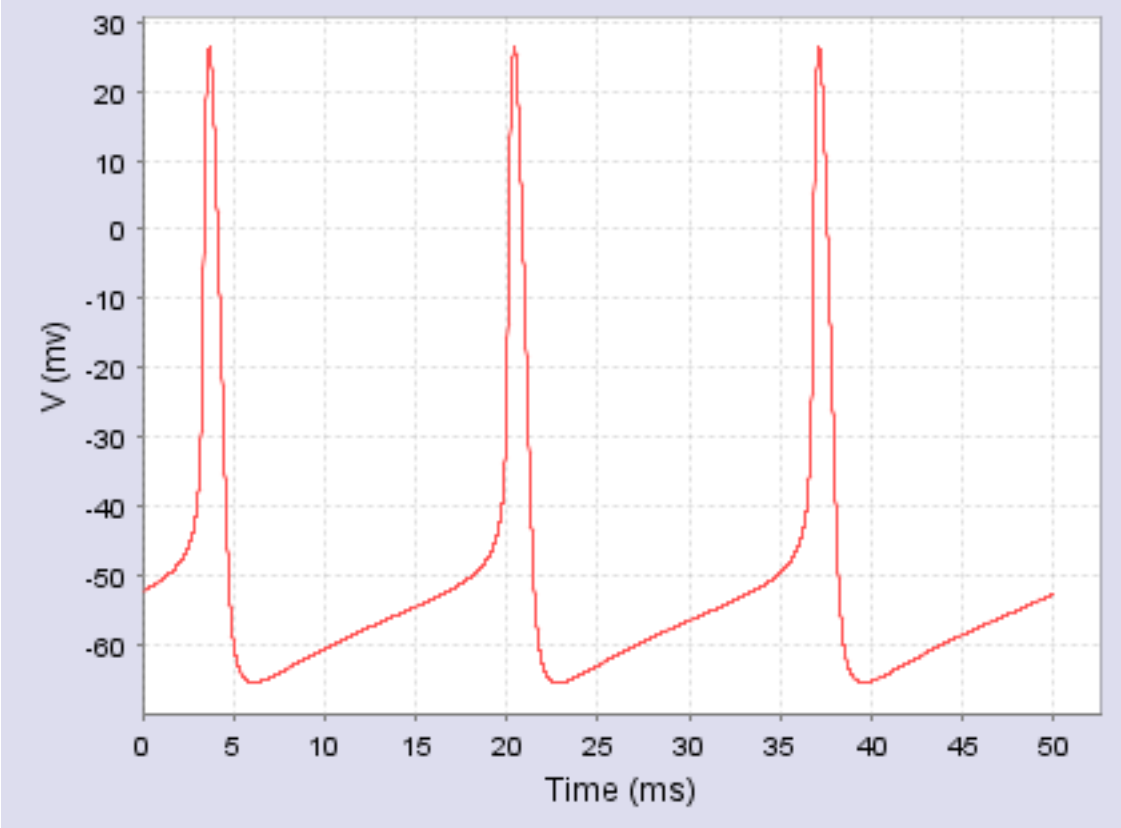
1. Description



Example action potentials (spontaneous activity).

This model simulates in retinal ganglion cells. It uses HH formalism and is capable of producing realistic firing properties in response to the constant depolarization. This is a single-compartment version of the model.

Abstract excerpt: *"Experimental efforts were guided by computer simulation studies of an excitability model consisting of five voltage- or ion-gated channels, which were identified from earlier voltage-clamp data. The ion channels include sodium, calcium, and three types of potassium channels, namely the A type (IK,A), Ca-activated potassium (IK,Ca), and the delayed rectifier (IK). A leakage channel was included to preserve input resistance continuity between model and experiment."*

2. References

- Fohlmeister JF, Miller RF.
  Impulse encoding mechanisms of ganglion cells in the tiger salamander retina.
  J Neurophysiol. 1997 Oct;78(4):1935-47.
  PMID: 9325362

3. Ordering

- **Order this model** or request further information.