**Table S1 Parameters for the stochastic Hodgkin-Huxley model**

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| SYMBOL | DEFINITION | VALUE, UNITS |
| Cm | Specific membrane capacitance |   |
| T | Temperature |   |
| EL | Leakage reversal potential |   |
| ENa | Sodium reversal potential |   |
| EK | Potassium reversal potential |  |
| gLeak | Leakage conductance |   |
| NNa | Na+ channel density |   |
| NK | K+ channel density |   |
|  | Opening rate (activation, Na+) |   |
|  | Opening rate (inactivation, Na+) |   |
|  | Opening rate (activation, K+) |   |
|  | Closing rate (activation, Na+) |   |
|  | Closing rate (inactivation, Na+) |   |
|  | Closing rate (activation, K+) |   |