

# Accepted Manuscript

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PII: S0028-3908(17)30442-2

DOI: [10.1016/j.neuropharm.2017.09.025](https://doi.org/10.1016/j.neuropharm.2017.09.025)

Reference: NP 6869

To appear in: *Neuropharmacology*

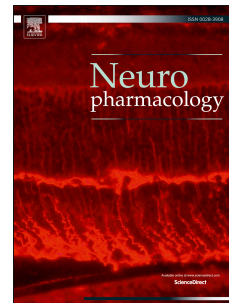
Received Date: 27 February 2017

Revised Date: 13 September 2017

Accepted Date: 15 September 2017

Please cite this article as: Jiménez-Vargas, Juana.Marí., Possani, L.D., Luna-Ramírez, K., Arthropod toxins acting on neuronal potassium channels, *Neuropharmacology* (2017), doi: 10.1016/j.neuropharm.2017.09.025.

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**Arthropod toxins acting on neuronal potassium channels**

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**Abstract**

Arthropod venoms are a rich mixture of biologically active compounds exerting different physiological actions across diverse phyla and affecting multiple organ systems including the central nervous system. Venom compounds can inhibit or activate ion channels, receptors and transporters with high specificity and affinity providing essential insights into ion channel function. In this review, we focus on arthropod toxins (scorpions, spiders, bees and centipedes) acting on neuronal potassium channels. A brief description of the K<sup>+</sup> channels classification and structure is included and a compendium of neuronal K<sup>+</sup> channels and the arthropod toxins that modify them have been listed.

**Keywords:** centipede, honeybee, neuronal potassium channel, peptide, scorpion, spider

**Abbreviations**

CNS: central nervous system, K<sup>+</sup>: potassium, Ca<sup>2+</sup>: calcium, Kv: voltage-gated potassium, K<sub>Ca</sub>: calcium-activated potassium, K<sub>ir</sub>: inwardly rectifying potassium, K<sub>2P</sub>: two-pore potassium, TM: transmembrane, P: pore, VSD: voltage-sensing domain, BK: Big potassium, IK: Intermediate conductance Ca<sup>2+</sup>-activated K<sup>+</sup>, SK: Small conductance Ca<sup>2+</sup>-activated K<sup>+</sup>, CaMBD: calmodulin binding domain, RCK1 and RCK2: Regulate

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