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Poster Presentation

The Role of Aquaporins in Synaptic Plasticity and Epilepsy

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Abstract

Introduction: One family of small integral membrane proteins called "aquaporins" have crucial role in water transport. Aquaporin-4 (AQP4), a double-sided water channel protein, shows the highest levels of AQP4 in the central nervous system. AQP4 binds to a subset of potassium channels such as Kir4.1 and Kir5.1, which can affect synaptic transmission. **Conclusion:** Thus, AQP4 have crucial role in alterations of synaptic plasticity and cognition which implicated in diverse neurological diseases such as epilepsy.

Keywords: Synaptic Plasticity, Water Channel, Synaptic Transmission, Aquaporins.

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