The 6<sup>th</sup> International Epilepsy Symposium

Shefa Neuroscience Research Center, Tehran, Iran, 24-26 August, 2018 The Neuroscience Journal of Shefaye Khatam

Volume 6, No. 3, Suppl 2

Poster Presentation

## The Role of Aquaporins in Synaptic Plasticity and Epilepsy

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## Published: 24 August, 2018

## Abstract

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**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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