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Poster Presentation

Aquaporins Function as a Novel Therapeutic Strategy for a Variety of Cerebral Disorders

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Abstract

Introduction: Some cells have specialized channels in their plasma membranes that allow water to be transported though the lipid bilayer much more expeditiously than by simple diffusion which said "aquaporins". The aquaporins are a family of membrane proteins that perform as water channels in several cell varieties and tissues in which fluid transport is crucial, like the gastrointestinal tract, lung, secretory glands, and brain. A family of transmembrane molecules knowns as aquaporins facilitate the movement of water across cellular compartments. Conclusion: The critical role of Aquaporin-4 (AQP4) is in mediating water fluxes in response to neuronal activity and maybe in seizure-induced edema. Therefore, function or expression modulation of AQP4 in a variety of brain disorders including hydrocephalus, tumor, stroke, and epilepsy can be suggested as a new therapeutic strategy.

Keywords: Therapeutic Strategy, Aquaporins, Epilepsy, Water Channels.

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