SR 49059

Potent and selective AVPR1A arginine vasopressin receptor 1A antagonist [1].

SR49059 may reduce trauma-induced ionic imbalance, blunting cellular water influx and brain edema after traumatic brain injury (TBI), by modulating Aquaporin 4. (AQP4) expression may emerge as a viable strategy for the reduction of fulminating edema following ischemic injury [2].

SR49059 also significantly reduced trauma-induced AQP4 up-regulation in the contused hemisphere. Moreover, brain water content was also significantly reduced paralleling the AQP4 suppression. These data provide further support that vasopressin (AVP) and V1a receptors can control water flux through astrocytic plasma membranes by regulating AQP4 expression. Taken in concert, these results affirm the laboratories contention that AQP4 can be effectively modulated pharmacologically [3].

These findings suggest SR49059 and AVPR1A arginine vasopressin receptor 1A inhibitors are potential tools for treating cellular edema post-TBI.

SR 49059 offers a new avenue in brain edema treatment and prompts further study into the role of vasopressin following brain injury [4] [5].

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