

PH.D. DISSERTATION DEFENSE OF



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Glutamate Uptake Regulation as a Therapeutic Strategy in Epilepsy

Epilepsy is one of the most common neurological disorders and is characterized by the occurrence of unprovoked seizures. Temporal lobe epilepsy (TLE) is the most common form of epilepsy with focal seizures. Unfortunately, some patients will develop refractory epilepsy that is pharmaco-resistant to current antiepileptic drugs (AEDs). Current AEDs work primarily by targeting neurons directly by inhibition of glutamatergic excitatory neurotransmission or enhancement of GABAergic inhibitory neurotransmission. Non-neuronal targets are an attractive alternative approach to treat epilepsy with potentially fewer deleterious effects. Neuronal hyperexcitability is a major contributor to epilepsy but increased evidence suggests that changes in astrocytic glutamate transporters can contribute to the development of epilepsy. This proposal aims to examine the cellular and molecular mechanisms associated with glutamate transporter dysregulation and their potential as a therapeutic target in epilepsy. I hypothesize that astrocytic glutamate transporter dysregulation contributes to the development of epilepsy and therefore can be targeted for the attenuation of epilepsy.

Friday, May 27, 2022

2:00PM (PST)

In-Person Location: SOM EDU G650