

Research internship – Channelopathies



Title: Investigating ion channel dynamics and action potential machinery involved in Epilepsy

Organizations: Synaptica & Donders Institute Nijmegen

Duration: 6-12 months

Internship Overview: Are you interested in the relationships between the molecular & ion channel dynamics and the resulting complex behavior of neuron dysfunction that occurs in channelopathies such as epilepsy? We have internships available for ambitious students with a background in neuroscience, biophysics and/or AI.

We use computational modelling, electrophysiological ion-channel recordings, and large genetic and molecular datasets to study how disease-associated genetic variants alter ion-channel function in epilepsy and other neurological disorders. A particular focus is on measuring the effects of drugs on ion channels and using mechanistic computational models to predict how pharmacological interventions may rescue mutation-induced functional deficiencies. Through collaborations with clinical and academic partners, we aim to translate these approaches toward more personalized treatment strategies for patients with ion-channel disorders.

For this internship, being able to perform computer programming yourself is a plus, but not obligatory as you will work together with a team of computational neuroscientists and we have a Synaptica collection of AI agents to help with your work.

Questions: Contact Dr. Marijn Martens at marijn.martens@synaptica.nl

More information: www.synaptica.nl

Team Synaptica

