

3rd International Conference on
Health Care and
Health Management

&

6th International Conference on
Neuroscience and
Neurological Disorders

November 04-05, 2019 | Prague, Czech Republic

Inhibitory vs exhibitory neuron factors - How the balance of conductive forces needs to be seen at a base level

Paul Lang

Epilepsy Connection Affiliated, Australia

Introduction: This presentation will be focussing on how the core differences between our 2 major neuron types – Inhibitory & Exhibitory – play a major role in the balance which controls seizures. I will be discussing the original medical views on the matter, then how views changed once technology gave us greater insight into electrical activity within the brain – and finalise by relating current research to a very understandable analogy such as taste and sound to give the presentation a much wider audience scope.

Description: “Humans have between 90 & 170 different “types” of Neurons (depending on how you classify sub-categories) but they all actually fall into 2 categories – Inhibitory vs Exhibitory. This effectively means the signal that neuron sends out either generates more (exhibitory) or less (inhibitory) reactionary signals from the surrounding neurons. So basically, some neurons will generate more activity from the neurons around them – whereas others will cause the neurons around them to generate less activity. Prior Neurological studies into Epilepsy focussed mainly on the accelerant (Exhibitory) factor – that flaring was only caused by an increase in electrical activity. But we have found this is not correct. It is actually a balancing act that involves the complex processes of ion gating channels combined MRNA

signals vs enzyme and protein regulation and charged ion volumes staying at a steady rate that does not activate the flaring process. And that’s just a simplified view of the issue to say the least.

A key factor we will be looking at is the role genetic signals play in ion gating channels that effect electrical conduction. Studies into SCN2A sodium regulation gene, CaMk11 enzyme, CNTN2 potassium regulators, PKD2 regulators, CRAC regulators, EAG2 potassium channels, MRNA Sodium channel regulators and Reelin gene will be discussed as part of the presentation.

Speaker Biography

Paul Lang is the Founder and CEO of ECA. Having been diagnosed with a rare form of Epilepsy himself at age 19. He took a lifelong interest in the condition and Neurology itself. After spending much of his adult life researching his own condition, he founded the charity ECA to help spread awareness about Epilepsy - but also support the work being done by charities & research organisations worldwide. Currently his foundation works with organisations from all over the world and ECA is the largest free global affiliate for Epilepsy charity services currently operating. He works constantly as an advocate for research and the expansion of other charities worldwide – collaborating constantly with other global organisations on worldwide campaigns & international conferences.

e: info@epcona.org



Notes: