Development of new medications for mental health conditions is a pressing need given the high proportion of people not responding to available treatments. We hope that presenting ebselen to a wider audience will inspire further studies on this promising agent with a benign side-effects profile. Laboratory research, animal research and human studies suggest that ebselen shares many features with the mood stabilising drug lithium, creating a promise of a drug that would have a similar clinical effect but without lithium’s troublesome side-effect profile and toxicity. Both drugs have a common biological target, inositol monophosphatase, whose inhibition is thought key to lithium’s therapeutic effect. Both drugs have neuroprotective action and reduce oxidative stress. In animal studies, ebselen affected neurotransmitters involved in the development of mental health symptoms, and in particular, produced effects of serotonin function very similar to lithium. Both ebselen and lithium share behavioural effects: antidepressant-like effects in rodent models of depression and decrease in behavioural impulsivity, a property associated with lithium’s anti-suicidal action. Human neuropsychological studies support an antidepressant profile for ebselen based on its positive impact on emotional processing and reward seeking. Our group currently is exploring ebselen’s effects in patients with mood disorders. A completed ‘add-on’ clinical trial in mania showed ebselen’s superiority over placebo after three weeks of treatment. Our ongoing experimental research explores ebselen’s antidepressant profile in patients with treatment resistant depression. If successful, this will lead to a clinical trial of ebselen as an antidepressant augmentation agent, similar to lithium.

Invited by Jean-Rene.Cardinaux@chuv.ch

Selected recent publications:


This event will take place on a virtual space on Friday, July 1st 2022 at 14:30 through the link:

https://chuv.webex.com/chuv/j.php?MTID=m7eb59aac5644d928611bce3625d772a0

Meeting number (access code): 2731 707 0096  Meeting password: MGn2qV2Yvp5