

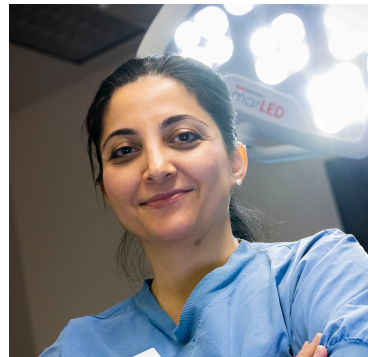


Lilly Schwieler

Karolinska Institutet

Talk title:

Peripheral and central levels of
kynurenine metabolites in
COVID-19 patients.



Elham Rostami

Uppsala University

Talk title:

COVID19 and neurological
complication

Wednesday May 11, 2022, at 14:15-15:45

Online via Zoom

Lilly Schwieler is Associate Professor at KI, institution of Physiology and Pharmacology. 15 years of experience of research on the physiological and pathophysiological significance of kynurenine metabolites during immune activation and psychiatric disorders and four years experiences from Drug discovery within Neuroscience at AstraZeneca, Sweden. Research strategies span from pharmacology in rodent models, to human experimental medicine with the goal to find new targets for drug treatment and the research has in total generated 71 peer-reviewed journal articles yielding >1600 citations, and an h-index of 24.

Elham Rostami is consultant neurosurgeon and Associate Professor in neurosurgery at Uppsala University. Her main research area is acute brain injury.

ABSTRACTS



Lilly Schwieler

Talk title:

Peripheral and central levels of kynurenine metabolites in COVID-19 patients.

Growing evidence implies immune activation as a causal factor in disorders involving cognitive function. We have shown that immune-activation drives the brain kynurenine pathway leading to the production of several neuroactive metabolites affecting glutamatergic and cholinergic neurotransmission. Our focus in the present study is to understand the importance of the immune-induced neuroactive kynurenine metabolites in COVID-19 patients. Our data clearly show that plasma and cerebrospinal fluid levels of kynurenic acid and quinolinic acid (QUIN) are persistently upregulated and have not been normalized several months after SARSCoV-2 infection. Interestingly, the neurotoxic kynurenine metabolite QUIN was found to strongly associate to cerebrospinal fluid levels of neurofilament light chain (NfL) in the acute face of the disorder and may be associated with neural damages in these patients. The results give important incitements for further studies investigating the role of brain kynurenine pathway metabolites in the generation of cognitive dysfunctions following SARSCoV-2.

Elham Rostami

Talk title:

COVID19 and neurological complication

SARS-CoV-2 is associated with neurological manifestations including cerebrovascular disorder, encephalopathy, autoimmune and neuropsychiatric complications. The neurological manifestations of COVID 19 was seen very early on at UAS and the study "COVID19 and neurological complication" was initiated. The Symptoms severity can be as mild as anosmia to fatal encephalitis. Routine lab work-up can be normal in these patients but our studies have shown high levels of CNS injury markers as well as SARS-CoV-2 antibodies in CSF. These patients show persistent symptoms 6-12 month following the infection. The SARS-CoV-2 infection can lead to various neurological complications depending on the pathological cascade initiated by the virus. It is highly important to understand these underlying mechanisms and why some individuals suffer and others don't. If we could identify individuals at risk of developing these complications, we might also be able to prevent and/or recommend possible treatments.