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The NO-Age and NO-AD Seminar Series 051

'Astrocytes, sleep, and Alzheimer's disease' (tentative)

by

Prof. Rune Enger

Institute of Basic Medical Sciences, University of Oslo, Norway

at

14:00-15:15 (CET), Monday, 20th June. 2022

Register in advance:

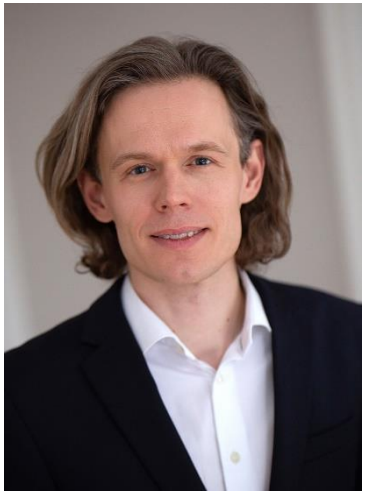
https://uio.zoom.us/webinar/register/WN_qASO3GRASd2ipChC7duytg

Organizers:

Evandro F. Fang (UiO), Jon Storm-Mathisen (UiO), Lene Juel Rasmussen (KU), W.Y. Chan (CUHK)

Queries: e.f.fang@medisin.uio.no

Previous recorded talks are available here: https://noad100.com/videos-previous-events/



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https://www.med.uio.no/imb/english/people/aca/runeng/index.html

Speaker: Rune Enger

Title: Astrocytes, sleep, and Alzheimer's disease (tentative)

Abstract: To be updated

Biography:
My research interests are mainly focussed on astrocyte–neuron interplay in the healthy and dysfunctioning brain. Broadly, I'm involved in projects belonging to the following categories:
What are the roles of astrocytic Ca^{2+} signals in the normal brain? Since the discovery that astrocytes can react with and communicate by local or spreading Ca^{2+} elevations, a range of different mechanisms have been linked to these signals. For instance, such signals have been proposed to influence neuronal network activity by release of transmitter substances in, or close by, synapses. Similarly, astrocytic Ca2+ signals have been proposed to influence vascular tone. Currently, I'm trying to outline the role of astroglial Ca^{2+} signals in spatial memory encoding and consolidation.
What are the mechanisms underlying cortical spreading depression (CSD)? CSD is the phenomenon underlying the perceptual disturbances of the migraine aura, and although first discovered over 70 years ago, key aspects of these events are still unknown.
What are the roles of astrocytic Ca^{2+} signals in epileptic seizures and chronic epileptic brain tissue?
To answer these questions I work with advanced imaging techniques. Most importantly, two-photon microscopy in awake head-fixed mice, in combination with electrophysiology and molecular strategies.