

Press release

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Basic information

Name: Signe Rode Andreasen

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Department of: Biomedicine

Main supervisor: Mai Marie Holm

Title of dissertation: "Hippocampal alterations in rodent disease models"

Date for defence: 1. oktober at (time of day): 14.00 Place: Biokemisk Aud. 6, byg. 1170, lok. 347.
Ole Worms Allé 3, 8000 Aarhus.

Press release (Danish)

Et skridt tættere på at forstå migræne

Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Signe Rode Andreasen, der forsvare det d. 1. oktober.

Når vi lærer og husker forekommer der ændringer i kommunikationen mellem vores hjerneceller. Hjernecellerne sender lynhurtige kemiske signaler fra den ene hjernecelle til den anden, tværs over de såkaldte synaptiske kløfter, mens de celler, som hedder astrocytter, holder skarpt øje med trafikken og rydder op i kemien. Hjernen er plastisk – den forandrer sig hele tiden, når vi lærer nyt.

Et nyt ph.d.-projekt fra Aarhus Universitet, Health undersøger, hvordan de mekanismer i hjernen, der er med til at skabe hukommelse og indlæring, kan være påvirket ved svær arvelig migræne, FHM2. Mennesker med FHM2 har en mutation i et bestemt gen med navnet ATP1A2. Mutationen betyder, at en helt bestemt udgave af natrium-kalium-pumpen ikke fungerer korrekt. Denne natrium-kalium-pumpe sidder især i astrocytterne, og når den ikke virker ordentligt, går der ubalance i kemien i hjernen.

Signe Rode Andreasens studie viser at reduktionen i natrium-kalium-pumpen i mus med den samme mutation, som hos mennesker giver FHM2, har stor indvirkning på de mekanismer, der understøtter indlæring og hukommelse. Dermed åbner studiet op for nye hypoteser om de mekanismer, der kan være medvirkende til migræne.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 1/10 kl. 14.00 i Biokemisk auditorium, Aarhus Universitet, Ole Worms Allé 3, 8000 Aarhus. Titlen på projektet er "Hippocampal alterations in rodent disease models". Yderligere oplysninger: Ph.d.-studerende Signe Rode Andreasen, e-mail: srad@biomed.au.dk, tlf. 87167279.

Bedømmelsesudvalg:

Professor Eric Hanse, Department of Physiology, Institute of Neuroscience and Physiology, University of Gothenburg

Associate professor Uffe Kristiansen, Medicinal Chemistry Research, Department of Drug Design and Pharmacology, University of Copenhagen

Associate professor Agnete Larsen, Department of Biomedicine, East, Aarhus University

Press release (English)

A step closer to understanding migraine

The project was carried out by Signe Rode Andreasen, who is defending her/his dissertation oct. 1.

As we learn, the communication between our neurons change. The neurons are sending fast chemical signals from one neuron to the other across the synaptic clefts while a cell type called astrocytes are keeping an eye on the traffic and cleaning up in the chemistry.

A new PhD project from Health, Aarhus University, studies how the neuronal mechanisms involved in learning and memory, are affected by severe hereditary migraine, FHM2.

Individuals with FHM2 carry a mutation in the ATP1A2 gene. The mutation cause reduced activity of a sodium-potassium pump, which is mainly found in astrocytes. When it is not working properly, it causes an imbalance in the neuronal chemistry.

This study by Signe Rode Andreasen shows that a reduction of the sodium-potassium pump in mice caused by a mutation, which in humans leads to development of FHM2, significantly influence the mechanisms involved in learning and memory. The study opens for new hypothesis on the mechanisms contributing to migraine.

The defence is public and takes place on 1/10 at 14.00 in Biokemisk auditorium, Aarhus University, Ole Worms Allé 3, 8000 Aarhus. The title of the project is "Hippocampal alterations in rodent disease models". For more information, please contact PhD student Signe Rode Andreasen, e-mail: srad@biomed.au.dk, Phone +45 87167279.

Assessment committee: Professor Eric Hanse, Department of Physiology, Institute of Neuroscience and Physiology, University of Gothenburg
Associate professor Uffe Kristiansen, Medicinal Chemistry Research, Department of Drug Design and Pharmacology, University of Copenhagen
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