

## Press release

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### Basic information

Name: Peter Lund Ovesen    Email: [plovesen@biomed.au.dk](mailto:plovesen@biomed.au.dk) Phone: 28935077

Department of: Biomedicine

Main supervisor: Professor Anders Nykjær

Title of dissertation: Implications of SorCS1 in neurodegenerative and psychiatric disorders

Date for defence: 13/12 - 2018 at (time of day): 13.00 Place: Ole worms alle 3, Building 1170, Auditorium 6

Press release (Danish)

Receptoren SorCS1 i psykiatriske lidelser og Alzheimers sygdom

Viden om specifikke proteiner og deres biologiske funktion i hjernen er afgørende for vores forståelse af, hvordan genetiske mutationer kan forudsige hjernesygdomme og for vores evne til at behandle dem. Mutationer i membranreceptoren SORCS1 er associeret til psykiske lidelser, der opstår under den tidlige udvikling af hjernen, men også til udviklingen af Alzheimers sygdom hos ældre, hvilket tyder på forskellige biologiske funktioner. I sine studier, har Peter L. Ovesen undersøgt funktionen af SorCS1 i nerveceller, der kan forklare, hvordan den er impliceret i udvikling af hjernesygdomme. De nye resultater viser, at SorCS1 er udtrykt under den tidlige fase af hjernens udvikling, hvor den har en afgørende betydning for regulering af kontakten mellem specifikke nerveceller. Interessant har det vist sig, at dysfunktion af receptoren i mus forsager adfærds symptomer, der minder om dem man observer hos patienter med autisme. Derudover viser resultaterne en stærkt sammenhæng mellem nedsat aktivitet af SorCS1 og udvikling af Alzheimers sygdom.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 13/12 kl. 13 i Auditorium 6, Aarhus Universitet, Ole worms alle 3 bygning 1170, 8000 Aarhus C. Titlen på projektet er "Implikationer af SorCS1 i neurodegenerative og psykiatriske lidelser". Yderligere oplysninger: Ph.d.-studerende Peter Lund Ovesen, e-mail: [plovesen@biomed.au.dk](mailto:plovesen@biomed.au.dk), tlf. 28935077.

Bedømmelsesudvalg:

Formand for bedømmelsesudvalget:  
Associate Professor Morten Skovgaard Jensen  
Department of Biomedicine  
Aarhus University

Extern international bedømmer:  
Group leader, Guido Hermey, PhD  
UKE, Universitätskrankenhaus Eppendorff

Extern national bedømmer:  
Associate Professor Ove Wiborg, MSc  
Aalborg University

Press release (English)

## Receptor SorCS1 in psychiatric disorders and Alzheimer's disease

Knowledge of specific proteins and their biological function in the brain is crucial to our understanding of how genetic mutations can cause brain diseases and our ability to treat them. Mutations in the membrane receptor SORCS1 is associated with mental disorders that occur during the early development of the brain, but also to the development of Alzheimer's disease in elderly, suggesting various biological functions. In his studies, Peter L. Ovesen has investigated the function of SorCS1 in nerve cells that can explain how it implicates the development of brain diseases. The new results show that SorCS1 is expressed during the early phase of brain development, where it has a decisive role in regulating the contact between specific nerve cells. Interestingly, dysfunction of the receptor in mice has shown behavioural symptoms that resemble those observed in patients with autism. In addition, the results show a strong correlation between reduced activity of SorCS1 and development of Alzheimer's disease.

The defence is public and takes place on 13/12 at 1 pm in Auditorium 6, Aarhus University, Ole Worms alle 3 building 1170, 8000 Aarhus C. The title of the project is "Implications of SorCS1 in neurodegenerative and psychiatric disorders". For more information, please contact PhD student Peter Lund Ovesen, email: [plovesen@biomed.au.dk](mailto:plovesen@biomed.au.dk), Phone +45 2893 5077.

Assessment committee:

Chairman and moderator of the defence:  
Associate Professor Morten Skovgaard Jensen  
Department of Biomedicine  
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External international opponent:  
Group leader, Guido Hermey, PhD  
UKE, Universitätskrankenhaus Eppendorff

External national opponent:  
Associate Professor Ove Wiborg, MSc  
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