

## Press release

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### Basic information

Name: Kristian Stær Email: [kst@clin.au.dk](mailto:kst@clin.au.dk) Phone:

Department of: Clinical Medicine

Main supervisor: Nicola Pavese

Title of dissertation: Follow-up on in vivo assessment of brain neurotransmitter dysfunction and microglial activation as early markers of parkinsonian disorders in patients with iRBD.

Date for defence: 09.09.21 at (time of day): 10.30 Place: Eduard Biermanns Auditorium, Bartholins Allé 3, 8000 Aarhus C

Press release (Danish)

### Biomarkører i tidlig alpha-synucleinopati

Torsdag d. 9. september kl. 10.30 forsvarer Kristian Stær sin ph.d.-afhandling med titlen "Follow-up on in vivo assessment of brain neurotransmitter dysfunction and microglial activation as early markers of parkinsonian disorders in patients with iRBD".

De tidlige patofysiologiske processer i alpha-synucleinopati (f.x. Parkinson's sygdom) er endnu ikke fuldt belyste. Patienter med isoleret REM søvn adfærds forstyrrelse (iRBD), en sygdom præget af bla. ufrivillige bevægelser under REM søvn, har en høj sandsynlighed for at udvikle en form for alpha-synucleinopati senere i livet, sammenlignet med den almene befolkning. Da disse patienter derfor kan antages at være i et tidligt, præklinisk stadie af en alpha-synucleinopati, udgør de en ideel gruppe at undersøge for at opnå en bedre forståelse af de tidlige processer i disse sygdomme.

I den aktuelle afhandling blev fysiologiske ændringer, i form af betændelse og ændringer i aktiviteten af de cholinerge og dopaminerge neurotransmitter systemer i hjernen, hos iRBD patienter undersøgt med PET-scanninger i håbet om at afklare, om ændringer i disse systemer havde indvirkning på udviklingen af Parkinson's sygdom og lignende tilstande.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 09/09 kl. 10.30 i Eduard Biermanns Auditorium, Aarhus Universitet, Bartholins Allé 3, 8000 Aarhus C.

Bedømmelsesudvalg:

Professor Jens Christian Hedemann Sørensen - chairman of the committee and moderator of the defence

Department of Clinical Medicine - Department of Neurosurgery, Aarhus University, Denmark

Professor Paola Piccini

Imperial College London, Faculty of Medicine,  
Department of Brain Sciences, London, United Kingdom

Professor Christoph Scherfler

Department of Neurology, Medical University of Innsbruck, Austria

Press release (English)

### Biomarkers in early alpha-synucleinopathies

On Thursday 9 September at 10.30, Kristian Stær defends his PhD dissertation entitled "Follow-up on in vivo assessment of brain neurotransmitter dysfunction and microglial activation as early markers of parkinsonian disorders in patients with iRBD".

The early pathophysiological processes of alpha-synucleinopathies (ie. Parkinson's disease) are still not fully understood. Patients with isolated REM sleep behaviour disorder (iRBD), a condition with dream enactment and involuntary movement during REM sleep, are very likely to develop some form of alpha-synucleinopathy later in life, when compared to the background population. These patients, therefore, are an ideal group to investigate in order to better understand the early processes in alpha-synucleinopathies, as they can be considered in a prodromal stage of these diseases.

In the current thesis, physiological changes, in the form of inflammatory changes, and changes in the activity of cholinergic and dopaminergic neurotransmitters, in the brains of iRBD patients were investigated, using PET-imaging, with the aim of evaluating their impact on the development of Parkinson's disease or related disorders.

The defence is public and takes place on 09/09 at in Eduard Biermanns Auditorium, Aarhus University, Bartholins Allé 3, 8000 Aarhus C.

Assessment committee:

Professor Jens Christian Hedemann Sørensen - chairman of the committee and moderator of the defence

Department of Clinical Medicine - Department of Neurosurgery, Aarhus University, Denmark

Professor Paola Piccini

Imperial College London, Faculty of Medicine,  
Department of Brain Sciences, London, United Kingdom

Professor Christoph Scherfler

Department of Neurology, Medical University of Innsbruck, Austria

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