

## Press release

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### Basic information

Name: Jenny-Ann Phan      Email: [jap@biomed.au.dk](mailto:jap@biomed.au.dk) Phone: 27401305

Department of: Biomedicine

Main supervisor: Marina Romero-Ramos

Title of dissertation: Synaptic Integrity in the Nigrostriatal Pathway in Parkinson's Disease and Healthy Condition

Date for defence: June 11 2019 at (time of day): 13.00 Place: Eduard Biermann Auditorium, Lake Auditorium 1252-204 (Søauditorierne), Aarhus University

Press release (Danish)

I et nyt ph.d.-projekt fra Aarhus Universitet, Health, undersøges biomarkører for synaptisk funktion i Parkinsons sygdom ved hjælp af PET skanning. Projektet er gennemført af Jenny-Ann Phan, der forsvare det d. 11. juni, 2019.

Misfoldning af proteinet, Alpha synuclein, fører til tab af synaptisk signaloverførsel i hjernen og spiller en vigtig rolle i sygdomsudviklingen af Parkinson's sygdom. I dette studie undersøges adskillige biomarkører med Positron Emission Tomografi (PET) til at afsløre tidlige sygdomsforandringer i en rottemodel af Parkinsons sygdom. Et af de vigtigste fund er at tidligt tab af synaptisk funktion kan bestemmes ud fra niveauet af vesikulær monoamin transporter 2 (VMAT2). Dette fund understøtter at VMAT2 kan anvendes til at monitorere effekten af neuroprotective behandlingsformer i fremtidige studier.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 11/06/2019 kl. 13.00 i Eduard Biermann Auditorium, Aarhus Universitet, Bartholins Allé 3, 8000 Aarhus. Titlen på projektet er "Synaptisk integritet i det dopaminerge system i en rottemodel af Parkinsons sygdom samt hos raske forsøgspersoner". Yderligere oplysninger: Ph.d.-studerende Jenny-Ann Phan, email: [jap@biomed.au.dk](mailto:jap@biomed.au.dk) , Phone +45 27401305

Bedømmelsesudvalg: Lektor Mai Marie Holm, Institut for Biomedicin, Aarhus Universitet

Prof. Gwen Smith PhD, Richman Professor of Psychiatry and Behavioral Sciences  
Johns Hopkins University School of Medicine, USA

Prof. Deniz Kirik PhD MD  
Brain Repair and Imaging in Neural Systems, Department of Experimental Medical Science,  
Lund University, Sweden

Press release (English)

Misfolding of the protein, Alpha synuclein, is known to impair synaptic transmission and plays an important role in the pathogenesis of Parkinson's disease. With the focus on finding in vivo biomarkers of early disease stages, this study examined synaptic proteins by means of Positron Emission Tomography (PET) in a rat model of Parkinson's disease. One of the most important findings is that early synaptic impairment can be determined by the expression level of vesicular monoamine transporter 2 (VMAT2). This finding supports that VMAT2 can be used to monitor the effect of neuroprotective interventions in future investigations.

The project was carried out by Jenny-Ann Phan, who is defending her/his dissertation on June 11, 2019.

The defence is public and takes place on 11/06/2019 at 13.00 in Eduard Biermann, Lake Auditorium 1252-204, Aarhus University, Bartholins Allé 3, 8000 Aarhus. The title of the project is, Synaptic Integrity in the Nigrostriatal Pathway in Parkinson's Disease and Healthy Condition. For more information, please contact PhD student Jenny-Ann Phan, email: jap@biomed.au.dk , Phone +45 27401305.

Assessment committee:

Lektor Mai Marie Holm, Institut for Biomedicin, Aarhus Universitet

Prof. Gwen Smith PhD, Richman Professor of Psychiatry and Behavioral Sciences  
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Prof. Deniz Kirik PhD MD  
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