

Press release

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Basic information

Name: Thea Pinholt Lillethorup

Email: thealillethorup@clin.au.dk Phone: 28584656

Department of: Clinical Medicine

Main supervisor: Professor David James Brooks

Title of dissertation: Evaluating Göttingen minipig models of Parkinson's disease with PET imaging

Date for defence: 6th June 2018 at (time of day): 14:00 Place: Palle Juul-Jensen Auditoriet, Nørrebrogade 44, building 10G, Aarhus University Hospital

Press release (Danish)

Evaluering af Göttingen minigrismodeller for Parkinsons sygdom med PET billeddannelse

Udviklingen af en minigrismodel for Parkinsons sygdom og evaluering heraf ved brug af PET billeddannelse undersøges i et nyt ph.d.-projekt fra Aarhus Universitet, Institut for Klinisk Medicin. Projektet er gennemført af Thea Pinholt Lillethorup, der forsvarer det d. 6. juni 2018.

Ændring i dannelsen eller nedbrydningen af α -synuclein er vigtig for udviklingen af Parkinsons sygdom. Påvirkning af disse systemer kan derfor også bruges til at udvikle en stor dyremodel for sygdommen, der i fremtiden vil kunne bruges til test af ny medicin og udviklingen af biomarkører.

Dette ph.d.-projekt har testet, hvorvidt øget udtryk af α -synuclein-genet i Göttingen minigrise resulterer i symptomer, som ses hos Parkinsons patienter. Derudover er det blevet undersøgt, hvorvidt blokering af protein nedbrydning fører til ødelæggelse af dopamin-systemet og påvirker dyrenes motoriske funktion. For at kunne undersøge effekten af disse interventioner i minigrisene har projektet fokuseret på brugen af adfærdstest, PET billeddannelse og vævsfarvninger, der danner grundlaget for den endelige evaluering af en stor minigrismodel for Parkinsons sygdom.

Forsvaret af ph.d.-projektet er offentligt og finder sted d. 6. juni kl. 14:00 i Palle Juul-Jensen Auditoriet, Aarhus Universitetshospital, Nørrebrogade 44, bygning 10G, Aarhus C. Forsvaret holdes på engelsk. Projektets danske titel er "Evaluering af Göttingen minigrismodeller for Parkinsons sygdom med PET billeddannelse".

Yderligere oplysninger: Ph.d.-studerende Thea Pinholt Lillethorup, e-mail: thealillethorup@clin.au.dk, tlf. 28584656.

Bedømmelsesudvalg:

Lektor Mai Marie Holm, Institut for Biomedicin, Aarhus Universitet

Lektor Pedro Rosa-Neto, Departments of Neurology, Neurosurgery and Psychiatry, Translational Neuroimaging Laboratory, The Douglas Hospital Research Centre, Montréal, Québec, Canada

Professor Peter Jenner, Institute of Pharmaceutical Science, King's College London, Hodgkin Building, London, UK.

Press release (English)

Evaluating Göttingen minipig models of Parkinson's disease with PET imaging

The development of a minipig model of Parkinson's disease and its evaluation with PET imaging was investigated in a new PhD project from Aarhus University, Department of Clinical Medicine. The project was carried out by Thea Pinholt Lillethorup, who is defending her dissertation on 6th June 2018.

Alterations in the synthesis or degradation of α -synuclein are important for the development of Parkinson's disease. Influencing these systems can be used to develop a large animal model of the disease, which could be useful in the future to test new therapeutic strategies and develop new biomarkers.

This PhD project has tested whether α -synuclein overexpression in the dopamine producing neurons in the Göttingen minipig results in symptomatic and pathological manifestations of Parkinson's disease. Furthermore, we have tested whether blocking of protein degradation imposes deleterious effects on the dopamin system and affects the motor function of the animals. With the intention to propose a novel animal model of Parkinson's disease, this PhD project has focused on the use of behavioural testing, PET imaging and immunohistochemical tests to evaluate the effects of the listed interventions.

The defence is public and takes place on 06/06-18 at 14:00 in Palle Juul-Jensen Auditorium, Aarhus University Hospital, Nørrebrogade 44, building 10G, Aarhus C.

The title of the project is "Evaluating Göttingen minipig models of Parkinson's disease with PET imaging".

For more information, please contact PhD student Thea Pinholt Lillethorup, email: thealillethorup@clin.au.dk, Phone +45 2858 4656.

Assessment committee:

Associate Professor Mai Marie Holm, Chairman of the Committee and moderator of the defence, Department of Biomedicine, Aarhus University

Associate Professor Pedro Rosa-Neto, Departments of Neurology, Neurosurgery and Psychiatry, Translational Neuroimaging Laboratory, The Douglas Hospital Research Centre, Montréal, Québec, Canada

Professor Peter Jenner, Institute of Pharmaceutical Science, King's College London, Hodgkin Building, London, UK.

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