

Press release

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Basic information

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Department of: Clinical Medicine

Main supervisor: Professor Jens Christian Hedemann Sørensen

Title of dissertation: Disease modelling in Göttingen minipigs towards Parkinson's Disease

Date for defence: 20/06-19 at (time of day): 14.00 Place: Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, Entrance G, Auditorium B, G206

Press release (Danish)

Disease modelling in Göttingen minipigs towards Parkinson's Disease

På baggrund af prognoserne for de demografiske ændringer på forventet levealder forventes det, at antallet af Parkinsons patienter, som afficerer 1% af befolkningen over 60 år, vil fordobles fra år 2005 til år 2030. Behovet for at forstå sygdommen samt optimere og videreudvikle behandlinger er nødvendigt på grund af de store personlige og samfundsmæssige omkostninger.

Stordyrsmodeller er uundværlige og vigtige i transformationen fra laboratoriet til patientbehandling, idet de sammenkæder basalforskning med ny viden om sygdom og behandlinger.

Målet for dette studie er at skabe en stordyrsmodel for Parkinsons sygdom i Göttingen minigrisen ved brug af stereotaktiske mikroinjektioner med virale vektorer kodende for alphasynuclein. En progressiv model vil skabe bedre forståelse af Parkinsons sygdom i dens slutfase og mulige nye behandlinger men vil også kunne skabe klarhed om den langsomt progredierende fase af denne neurodegenerative sygdom.

På baggrund af introduktionen er det hensigten, at læseren vil være i stand til at sætte dette studie i relief til Parkinsons sygdom. Studiet baseres på fem manuskripter. Under foredraget vil man blive taget med på en rejse mod udviklingen af en ny stordyrsmodel, der er baseret på humane testede metoder indenfor magnet resonansskanninger, konventionel human stereotaktisk kirurgi med virale vektorer kodet for alphasynuclein over-ekspression, med videreudviklede og tilpassede metodikker af fiducials og mikroinjektions udstyr. Man guides gennem neurologiske og adfærdsmæssige tests, samt in vivo og post-mortem analyser med immunohistokemiske metoder og PET.

Med studiet er der skabt en meget brugbar platform for udvikling af stordyrsmodeller inden for Parkinsons sygdom, og vi er undervejs kommet tættere på nogle af de hidtil ubesvarede spørgsmål.

Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Andreas Nørgaard Glud, der forsvare det d. 20/06-2019

Forsvaret af ph.d.-projektet er offentligt og holdes på engelsk. Det finder sted den 20/06 kl. 14:00 på Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 99, Indgang G, Auditorium B, G206. Titlen på projektet er "Disease modelling in Göttingen minipigs towards Parkinson's Disease". Yderligere oplysninger: Ph.d.-studerende Andreas N. Glud, e-mail: angl@clin.au.dk, tlf. 22830572.

Bedømmelsesudvalg:

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Press release (English)

A new PhD project from the CENSE group at Department of Neurosurgery, Aarhus University, contributes to new knowledge on large animal modelling of Parkinson's Disease. The project was carried out by Andreas Nørgaard Glud, who is defending his dissertation on 20th June 2019 at 14.00.

The need to understand progressive neurodegenerative disorders, e.g., Parkinson's Disease (PD), is growing with the current prolonged life expectancy. It is estimated that 1% of the population over 60 years is affected by PD, making it one of the most common neurodegenerative diseases. A recently debated model is predicting that the projected number of PD patients in the 5 most populous countries in Western Europe and the 10 most populous countries in the world will double in number from 2005 to 2030. This will lead to a decrease in quality of life and a growth in costs for society. This calls for better understanding of the disease through models. Some elements of the disease can be understood on cellular or molecular levels or in smaller animal models, but when it comes to developing and testing human-intended devices or neurosurgical approaches, translational large animal models are superior.

The dissertation will explain the use of the Göttingen minipig as a translational platform for large animal modelling towards Parkinson's Disease, with overexpression of pathological proteins via transfection with viral vectors to the nigrostriatal system.

The project was carried out by Andreas Nørgaard Glud, who is defending his dissertation on 20/06-2019.

The defence is public and takes place on 20/06 at 14:00 at Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, Entrance G, Auditorium B, G206. The title of the project is "Disease modelling in Göttingen minipigs towards Parkinson's Disease". For more information, please contact PhD student Andreas Nørgaard Glud, email: angl@clin.au.dk, Phone +45 22830572.

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