

Press release

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Basic information

Name: Elias Sundelin Email: elias.sundelin@clin.au.dk Phone: 60747646

Department of: Clinical Medicine

Main supervisor: Professor Niels Jessen

Title of dissertation: Evaluation of Metformin Biodistribution using 11C-Metformin PET/CT

Date for defence: 22/3-18 at (time of day): 10 AM Place: Jeppe Vontilius auditorium

Press release (Danish)

At spore et lægemiddel i kroppen med hjælp af PET/CT

I et nyt ph.d.-projekt fra Aarhus Universitet, Health har forskere kunnet spore metformin fordeling i kroppen med en nyudviklet metode for at i fremtiden kunne stratificere behandlingen med lægemidlet. Projektet er gennemført af Elias Sundelin, der forsvare sin afhandling 22/3 2018

Metformin er førstevalgs-behandling ved type 2 diabetes mellitus, det det reducerer risikoen for kardiovaskulær sygdom, er vægtneutralt og sænker blodsukker-niveauerne. Metformins gavnlige effekter ved diabetes skyldes sandsynligvis virkning på leveren, hvor lægemidlet hæmmer sukkerdannelsen. Endvidere er der resultater, som viser at patienter i behandling med metformin, har en mindre risiko for brystkræft. Desværre er der stor variation i effekt af behandlingen og en del patienter får bivirkninger som måske kunne været forhindret, hvis de fik en anden behandling. Grundet dette, er der stor efterspørgsel på metoder til stratificeret behandling som kræver detaljeret indsigt i metformins fordeling i kroppen. Medhjælp af en ny metode udviklet på Aarhus Universitet og Aarhus Universitetshospital har forskere undersøgt fordelingen af metformin i leveren og brystkræft. Resultater fra projektet viser at blandt andet at fordelingen af metformin i kroppen kan være genetisk betinget. Dette kan være det første skridt mod stratificeret behandling af type II diabetes, og underbygger fremtidig forskning i effekten af metformin ved brystkræft.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 22/03 kl. 10 i Jeppe Vontilius auditorium, Aarhus Universitet, Vejnavn, By. Titlen på projektet er "Evaluation of Metformin Biodistribution using 11C-Metformin PET/CT". Yderligere oplysninger: Ph.d.-studerende Elias Sundelin, e-mail: elias.sundelin@clin.au.dk, tlf. 60747646.

Bedømmelsesudvalg:

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The Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen, Copenhagen, Denmark

Press release (English)

Tracing a drug in the body using PET/CT

Using radioactive labeled metformin, researchers at University of Aarhus has been able to trace metformin to the liver which may be useful in predicting response to treatment with the drug. In a new ph. d projekt from Aarhus University, scientists have been able to trace metformin in the body using a newly developed method that may become useful in stratifying treatment with metformin. The project was carried out by Elias Sundelin, who is defending his dissertation on 22/03 2018.

The ability to reduce cardiovascular events and ameliorate hyperglycemia and no cause weight gain, are all features of metformin that place it as first-line drug in the treatment of type 2 diabetes. The favorable effects of the drug in diabetes are proposed to be due to the action of metformin in the liver where it inhibits endogenous glucose production. Unfortunately, treatment response is variable. In addition, many patients are prone to side effects and may benefit more from alternative treatments. This increases the demand for stratifying treatment, but this demands detailed information on drug-action.

The defence is public and takes place on 22/03 at 10 AM in Jeppe Vontilius Auditorium, Aarhus University, Road, City. The title of the project is Evaluation of Metformin Biodistribution using ¹¹C-Metformin PET/CT. For more information, please contact PhD student Elias Sundelin, email: elias.sundelin@clin.au.dk, Phone +45 60747646.

Assessment committee:

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