

Press release

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Basic information

Name: Anne Troldborg Email: anne.m.troldborg@clin.au.dk Phone: 40789072

Department of: Clinical Medicine

Main supervisor: Professor Kristian Stengaard-Pedersen

Title of dissertation: SLE and the innate immune system - the lectin pathway and proteins of the complement system

Date for defence: 9th of June at (time of day): 2pm Place: Eduard Biermann Auditory, Aarhus University

Press release (Danish)

Komplementaktivering gennem lektinvejen hos patienter med lupus.

Lektinvejens proteiner er involverede i sygdomsmekanismerne ved den autoimmune sygdom Lupus, et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Anne Troldborg, der forsvarer det d. 9/6-17

Komplement systemet er en vigtig del af det medfødte immunforsvar. Systemet beskytter os mod invaderende mikroorganismer og vedligeholder kroppens balance (homeostase) ved at sørge for at døde celler fjernes hensigtsmæssigt. Der er konstant celler, der dør i kroppen. Hvis de ikke fjernes korrekt, angriber vores immunforsvar cellerne, og medfører øget risiko for at udvikle den autoimmune lidelse, Lupus.

Igennem PhD'en har vi hos mere end 400 SLE patienter undersøgt samtlige proteiner, der er involverede i komplementaktivering gennem Lektinvejen. Vi har kunnet vise, at der er øget aktivering gennem Lektinvejen hos lupus patienter. Vi har endvidere udviklet en målemetode til at analysere komplementaktivering, som ser ud til overbevisende at kunne adskille patienter med lupus fra raske kontroller.

Afhandlingen har frembragt ny viden vedrørende lupus sygdommens mekanismer. Vi har vist, at også den del af komplementsystemet, der kaldet Lektinvejen, er involveret i lupus patogenesen. Endvidere, at der kan optimeres på målemetoder for komplementaktivering, som kan gøre det nemmere at diagnosticere sygdommen og potentielt hjælpe med en mere præcis inklusion, når fremtidige behandlingsformer skal testes. Studier som dette kan være med til at bane vejen for den "Personalized medicin" vi ønsker at kunne give vore patienter.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 9/6-17 kl. 14.00 i Eduard Biermann auditorium (bygn.1252 lokale 204), Aarhus Universitet, Bartholin Allé 3, Aarhus. Titlen på projektet er "SLE og det medfødte immunforsvar - Lektinvejen og proteiner i komplementsystemet". Yderligere oplysninger: Ph.d.-studerende Anne Troldborg, e-mail: anne.m.troldborg@clin.au.dk, tlf. 40789072.

Press release (English)

Complement activation through the Lectin Pathway in patients with Lupus

Proteins of the Lectin pathway are involved in the pathogenesis of Lupus. The project was carried out by Anne Troldborg, who is defending her dissertation on 9/6-17.

The complement system is an important part of the innate immune system. The system protects us from invading microorganisms and maintains the body's balance (homeostasis) by ensuring that dead cells are removed appropriately. There are constantly cells that die in the body. If they are not

removed properly, our immune system attacks the cells, and increases the risk of developing the autoimmune disease, Lupus.

Throughout this PhD, we have examined all proteins involved in complement activation through the Lectin pathway in more than 400 SLE patients. We have shown that there is increased activation through the lectin pathway in patients with lupus. We have further developed an assay to analyze complement activation, which seems to convincingly distinguish patients with lupus from controls. The dissertation has provided new knowledge regarding lupus disease mechanisms. We have shown that the part of the complement system called the Lectin Pathway, is involved in the pathogenesis of Lupus. Furthermore, that complement activation measurements can be optimized to improve the diagnoses of lupus and potentially help with more accurate inclusion when future treatments are to be tested. Studies like this can help pave the way for the "Personalized Medicine" we wish to provide for our patients.

The defence is public and takes place on 9/6-17 at 2pm in Eduard Biermann auditorium (bygn.1252 lokale 204), Aarhus University, Bartholin Allé 3, Aarhus. The title of the project is "SLE and the innate immune system - the lectin pathway and proteins of the complement system". For more information, please contact PhD student Anne Troldborg, email: anne.m.troldborg@clin.au.dk, Phone +45 40789072.

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