AARHUS UNIVERSITY

Press release

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Basic information

Name: Rasmus Pihl Email: pihl@biomed.au.dk Phone: 28345909

Department of: Biomedicine

Main supervisor: Steffen Thiel

Title of dissertation: Novel insights into the function and regulation of MASPs of the lectin pathway of complement

Date for defence: January 11th 2019 at (time of day): 13.00 Place: Eduard Biermann (søauditorierne, 1252 - 204)

Press release (Danish)

Nye aspekter af enzymer i det medfødte immunforsvar

Vores immunforsvar er et yderst komplekst system, der både har evnen til at beskytte os mod infektioner, men også kan skade os selv som det ses i forskellige autoimmune sygdomme. Det er derfor helt essentielt at have en grundlæggende forståelse af hvordan systemet reguleres for at kunne behandle autoimmunitet bedst muligt. Ph.d.-projektet har omhandlet enzymer i en gren af det medfødte immunforsvar kaldet komplementsystemet. Disse enzymer, der hedder MASP-1, -2 og -3, er med til at igangsætte komplementsystemet som respons på molekylære strukturer, der er fremmede for kroppen. I studiet defineres en biologisk funktion for MASP-3, da det vises at MASP-3 aktiverer den alternative aktiveringsvej af komplementsystemet. Ydermere identificerer ph.d. projeketet en ny biologisk hæmmer af komplementsystemet, der er i stand til at regulere MASP-1 og MASP-2 men ikke MASP-3. Resultaterne er sammenfattet i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Rasmus Pihl, der forsvarer det d. 11.01.2019.

Forsvaret af ph.d.-projektet er offentligt og finder sted d. 11.01.2019 kl 13.00 i auditorium 1252-204 (Eduard Biermann), Aarhus Universitet, Bartholins Allé 3, 8000 Aarhus C. Titlen på projektet er "Novel insights into the function and regulation of MASPs of the lectin pathway of complement". Yderligere oplysninger: Ph.d.-studerende Rasmus Pihl, pihl@biomed.au.dk, tlf. 28345909

Bedømmelsesudvalg:
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PhD Martin Kolev, Investigator Complement Biology ved GlaxoSmithKline Medicines Research Centre, England

Press release (English)

Novel aspect of enzymes in the innate immune system

The immune system is a complex network that is capable of defending us against infections but is also able to harm us, as is seen in the wide range of autoimmune diseases. Thus, it is crucial to have an extensive knowledge about the mechanisms that regulate immunity to ensure that autoimmunity can be prevented without rendering patients vulnerable to infections. In this ph.d. project, the main focus is enzymes that operate within an effector arm of the immune system termed the complement system.

These enzymes, which are called MASP-1, -2 og -3, are responsible for initiating a complement response upon the encounter of foreign molecular structures. The results from this ph.d. project asisst in defining a biological role for MASP-3, as it is shown that MASP-3 activates the alternative pathway of complement. Moreover, we have discovered a novel, biological inhibitor of MASP-1 and MASP-2 that does not affect MASP-3. The results are summarized in the ph.d. project from Aarhus University, Health. The project was carried out by ph.d. student Rasmus Pihl, who is defending his dissertation on 11.01.2019.

The defence is public and takes place on 11.01.2019 at 1.00 p.m in auditorium 1252-204 (Eduard Biermann), Aarhus University, Bartholins Allé 3, 8000 Aarhus C. The title of the project is "Novel insights into the function and regulation of MASPs of the lectin pathway of complement". For more information, please contact PhD student Ph.d. student Rasmus Pihl, pihl@biomed.au.dk, +45 28345909

Assessment committee:
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